THIRD SERIES VOL 54 NUMBER 8 MAY 1947

THE JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

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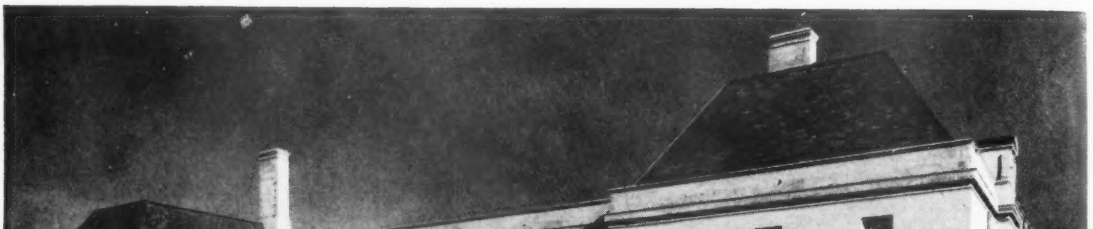

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THE JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

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Presentation of Royal Gold Medals

Royal Institute 'occasions' generally produce good speeches. The ceremony of presenting five Royal Gold Medals brought into the Henry Jarvis Hall an unusually fluent and witty group of architect orators. Each recipient was introduced by a prominent member who gave an account of his (the recipient's) career and work. After being presented with his medal, each recipient replied. Mr. Curtis Green was becomingly modest about his great volume of work, gave full credit to his partners and staff, and told young architects to remember that the future of architecture was in their hands. Professor Sir Charles Reilly reminisced on his happy days at Liverpool, and amused his hearers by describing his first arrival in that city on a lorry carrying his competition designs for Liverpool Cathedral and his finding his school busily copying sheets of Gothic detail. Mr. Edward Maufe was short, sincere and convincing. Sir Patrick Abercrombie took the opportunity to deprecate short term planning, and finally came Professor Richardson at his wittiest; he gave *sursum corda* as a motto for all young architects—as well as B.B.C. listeners—and then likened present-day building to substitute marmalade and pleaded for an early return to the real fruit of architecture. Altogether it was a pleasant ceremony, beginning with something of a processional entry of medallists led by the President, who set the keynote of the evening by a moving speech. Reports of the speeches are given in this JOURNAL.

Bankside Power Station

The following letter signed by the President was published in THE TIMES of 8 May.

Sir,

At the meeting of the Council of the Royal Institute of British Architects held today, the decision to proceed with the erection of the generating station on Bankside was fully considered. Without questioning the ability of one of our greatest architects to design satisfactorily a building of this nature, the Council recorded unanimously their grave concern that the project was to be proceeded with in face of the strong opposition expressed by the Dean and Chapter of St. Paul's, the London County Council and the other local authorities concerned.

The views of the Royal Institute have been conveyed to the Minister.

Yours faithfully,

L. H. KEAY,
President.

6 May 1947

The St. Lawrence Gate at Drogheda which is one of the towns to be visited during the Dublin Conference. The number of applications already received for membership of the Conference indicates that it is as likely to be as well attended and successful as were pre-war conferences

Exhibition of Czechoslovak Architecture

An exhibition of historical, pre-war and current Czechoslovak architecture is to be held at the R.I.B.A. from 10 to 24 June. It will be officially opened on the evening of Monday 9 June, by the

President and the Czechoslovak Ambassador, Dr. Kratochvil, who has recently arrived in this country.

The exhibition will begin with a short historical survey of the architecture of Bohemia, Moravia and Slovakia, and continue with a section dealing with modern Czechoslovak architecture between the two wars. This will consist of photographs, plans and models. The present effort at reconstruction in Czechoslovakia, which is expressed as a Two Year Plan, will be fully illustrated by plans and models of schemes which have been approved by the Government.

It seems likely that this exhibition will prove as interesting to architects in this country as did the Swiss Exhibition. As happened in the case of the Swiss Exhibition there will be an opportunity for British architects to study the work of their foreign colleagues and also to meet a few of them personally. The architect to the exhibition is Mr. J. Krejcar, who will perform the same functions as did Mr. Conrad D. Furrer for the Swiss Exhibition.

Ordnance Survey Maps

Members in the United Kingdom will find, enclosed as a loose inset in this JOURNAL, the form of application for a licence to reproduce parts of Ordnance Survey maps without prior sanction from the Controller of H.M. Stationery Office, at a cost of 5*s.* per annum, or 25*s.* for a period of five years.

As was explained in these columns in the March JOURNAL, this concession is the result of negotiations by the Royal Institute with the Director-General of the Ordnance Survey and the licence will cover the reproduction of portions of Ordnance Survey maps of all scales. It will be observed that the licence stipulates reproduction by hand tracings made in the members' own office for professional purposes only, and not for re-sale. The fee will be payable by each practising member so that more than one fee may be payable by some firms.

Architect's Portrait Purchased

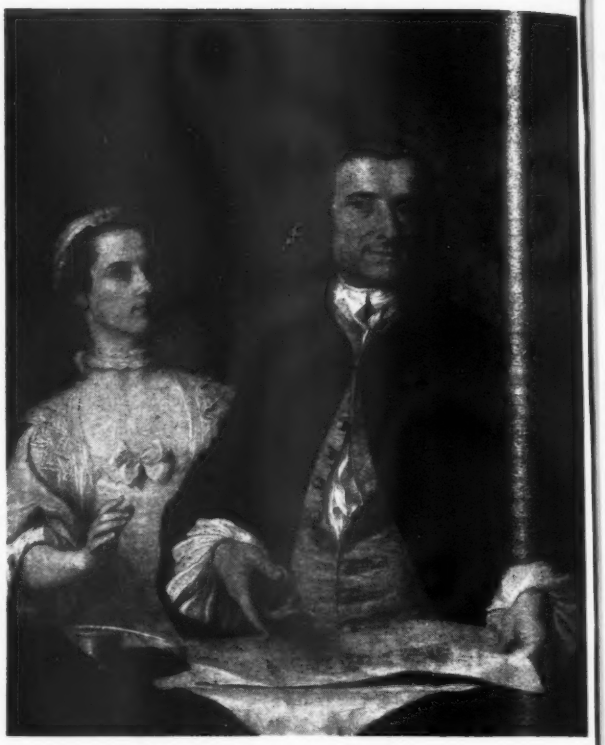
A portrait of Isaac Ware (d. 1766) and his daughter, probably by Andrea Soldi, has lately been acquired by the R.I.B.A. and hangs on the fourth floor in the Institute building. The painting, whose subject was only recently identified, was purchased from the collection of Mrs. Batt, of Burford, on generous terms, the owner being desirous that it should find a permanent home in the Institute. Ware was one of the most active architects of the Palladian group and held many offices under the Crown. He is said to have begun life as a chimney-sweep and been 'discovered' and educated by a wealthy patron. Contemporary gossip records that he never wholly eliminated from his complexion the soot ingrained during his first apprenticeship. One of his principal works was Wrotham Park (for Admiral Byng) and this is the subject of the drawing shown in the portrait, while in the background of the original it is seen under construction. This dates the painting at about 1754. After the death of his second wife, Ware's two daughters, Charlotte and Mary, lived with him and one of them (probably the one in the portrait) continued to do so up to his death. The painting is unsigned, but 'Mr. Soldy' is pencilled on the back of the frame. As the frame is considerably later than the painting this evidence is not conclusive, but on stylistic grounds the attribution is extremely probable. Soldi was a Florentine who was active in England till shortly after 1766.

Cricket

The annual cricket match between the R.I.B.A. and the Architectural Association will take place on Wednesday 25 June on the A.A. ground at Elstree. The match will start at 11.30 a.m. and lunch will be available.

It is hoped that the revival of this event—after a lapse of eight years—will be appreciated, and members who would like to play in the match should send a postcard to Douglas Taylor [*A*], 24 Dean Street, W.1, who will be glad to receive applications from cricketers and arrange transport to the ground, if required.

The Blue Circle Cricket Club have also invited the R.I.B.A. to provide a team to play them at Snaresbrook on Sunday, 27 July, the match to begin at 11.30 a.m. Mr. Douglas Taylor has also undertaken to make the arrangements for this match. Members who have been guests of the Blue Circle Cricket Club in the past will have very pleasant recollections of the club's hospitality.



Isaac Ware and his daughter

Office Experience for Students of Architecture

On page 287 of the March JOURNAL it was announced that the Council of the Royal Institute would welcome the co-operation of members willing to take students into their offices to gain practical experience, and to send their names to the Secretary. The response has been extremely disappointing: only seven names were received.

With the approach of the long summer vacation the Institute is receiving an increasing number of enquiries from students anxious to work in the offices of London architects for the greater part of their vacation and the Institute is equally anxious to find places for them in order to enhance their studies.

The Council, therefore, once again appeals to members with offices in London to co-operate in the scheme and to notify the Secretary of their willingness to do so.

On the Cover

The Rococo Teahouse at Potsdam, photographed by F. Hepner, Ph.D., historian and architectural photographer.

R.I.B.A. Diary

WEDNESDAY 4 JUNE 6 P.M. A.S.B. Lecture. '*District Heating*' by J. R. Kell, A.M.I.Mech.E., M.I.H.V.E., M.Inst.F.

TUESDAY 10 JUNE TO TUESDAY 24 JUNE 9.30 A.M. TO 5.30 P.M. (Sats. inclusive.) Exhibition of Czechoslovakian Architecture, Henry Florence Hall, R.I.B.A.

WEDNESDAY 11 JUNE TO SATURDAY 14 JUNE inclusive. British Architects' Conference, Dublin.

TUESDAY 24 JUNE 6 P.M. General Meeting for announcement of results of Council Election.

Presentation of Royal Gold Medals for the war years

At the R.I.B.A. 15 April 1947. The President in the chair

THE ceremony of presentation of the Royal Gold Medal to Mr. Curtis Green (1942), Professor Sir Charles Reilly (1943), Mr. Edward Maufe (1944), Professor Sir Patrick Abercrombie (1946) and Professor A. E. Richardson (1947) took place at the Royal Institute on Tuesday 15 April 1947. The proceedings were as follows:

The President: The ceremony this evening is, I believe, unprecedented in the annals of the Institute, for it is to be my privilege to invest no less than five very distinguished members of the Institute with the Royal Gold Medal, awarded by His Majesty the King on the recommendation of the Council of the Institute. Realizing the cause which has made it impossible to hold this ceremony since 1939, I am sure we all hope that the ceremony this evening, which, as I said, is without precedent, will be unique.

Never before, I assume, has a President been entrusted with so much gold, and never before, I imagine, have so many, whose talents have been acclaimed by the Council, assembled at one time in this Institute. You will hear eulogies of the recipients from those who are far more competent to assess their abilities than I am. Therefore I shall only refer very briefly to each of the eight of our professional brethren upon whom the Council has recommended His Majesty to confer this signal honour since 1940. Five of the eight it will be my privilege to invest with the Royal Gold Medal.

Charles Annesley Voysey, the Gold Medallist for 1940, was without doubt an outstanding individualist. The war and Voysey's health made a public award of the Medal impossible. It is a matter of regret to all of us, I am sure, that the son of this great architect is unable to be with us this evening to receive the token which his father, who made such an outstanding contribution to architecture, should have received.

Frank Lloyd Wright was the recipient of the Medal in 1941. Whilst we recognized here the great ability of this outstanding architect from across the Atlantic, he failed to realize how we, in the midst of a great war, could spend our time in recognizing someone outside. Some of you may remember what Lloyd Wright said when he accepted this great honour. The message which came across the Atlantic was: 'A culture like this can never lose'. Those of you who remember those days and the trials which we were going through in this country realize what Lloyd Wright's message meant to us. After all, he proved to be as good a prophet as he is an architect. We did not lose and we never shall lose. We very much regret that it has not been possible for Lloyd Wright to fly over to receive the Medal this evening. It will be sent to him as quickly as possible.

William Curtis Green was the Gold Medallist for 1942. His outstanding ability has been recognized not only by this Council but also by that Association which is so closely allied to us, of which he was President in 1912-1913, and by his election as a Royal Academician in 1933. Many towns have benefited by his versatility and he will be the first of the brilliant architects to be invested this evening.

Charles Herbert Reilly was the Gold Medallist for 1943. Professor Sir Charles Reilly, now honoured by H.M. the King for the third time, is best known for his work as an architectural educationalist and is greatly beloved for the fatherly interest that he has always shown in those who have passed through his hands as students. Their welfare has always been his concern. I should like to voice a personal tribute to one who befriended a stranger in a great city. Sir Charles may be a keen critic but he can also be a very staunch friend.

Edward Maufe was the Gold Medallist in 1944. To be a cathedral builder in these rather materialistic days must confer a degree of eminence to which few can hope to attain. The delicacy and character of his work have led to the bestowal upon him of the highest form of flattery. Maufe's ability has been recognized by the Royal Academy, of which he is an Associate, and I am sure we trust that he may be able to resume active operations upon his cathedral at Guildford as quickly as possible.

Victor Vesnin was the recipient of the Medal in 1945. It was fitting, I think, that when the turn came again for an award to be made to an architect outside these isles the Council should look to the land of a great ally. In fact, I doubt whether there were many countries to which we could have looked except those of allies. Victor Vesnin, the architect of the great Dneiper Dam, was also the President of the Academy of Architecture of the U.S.S.R., and in 1937 he was elected a Deputy to the Supreme Soviet. The Gold Medal has been sent to this recipient already, typifying, as it does, the highest honour which this Institute can recommend should be conferred upon an architect in a foreign land. We all hope that this recognition of a great Russian architect may tend to strengthen the bonds between two great nations.

Sir Patrick Abercrombie, the Gold Medallist of 1946, is the second Gold Medallist this evening with close associations with Liverpool, where he was formerly Professor of Civic Design at the University. His outstanding work, I suppose, was the preparation of the London Plan in association with J. H. Forshaw. His activities as a planner are boundless, and if time continues to treat him kindly there will be very few counties in this country in which he will not have laid down some plan for posterity to acclaim.

Professor Albert Edward Richardson, the Gold Medallist this year, just misses being a very important person indeed. Had the Royal Gold Medal been presented in 1901 and in 1924, Professor Richardson would have been the hundredth recipient, for the Medal was instituted by Queen Victoria in 1848 for the promotion of architecture. Professor Richardson has taught the art that he has practised, and his ability has also been recognized by his election as a Royal Academician. He is a champion of the glorious work of the Georgian period. Some may be familiar with his paint box and some with his front door key, while others may be envious of the means of transport which he occasionally adopted, though in these days they might find it more picturesque than speedy.

Having made this very brief introduction, I shall call upon selected members of the Institute to give a fuller appreciation of the work of the recipients and then ask two Gold Medallists to escort each of the recipients to the platform, that he may be invested here and briefly acknowledge the great honour which has been bestowed upon him.

I now call upon Sir Giles Gilbert Scott to speak on the work of Mr. W. Curtis Green, R.A., Past Vice-President, the Royal Gold Medallist for 1942.

Sir Giles Gilbert Scott, O.M., R.A.: The presentation of no less than five Gold Medals in one evening is a unique event, as the President has stated, in the history of the R.I.B.A. It is, I feel, an occasion that calls for flights of eloquence and oratory to which I cannot aspire, but I have the very

pleasant task of saying a few words concerning the works of the first recipient this evening of the Royal Gold Medal, awarded in 1942 to Mr. Curtis Green, Royal Academician.

I undertake this task with particular pleasure, as Curtis Green is one of my oldest architect friends. I knew him by name some years before I knew him personally, not as a practising architect but as an accomplished black and white artist, whose charming pen and ink drawings of architectural subjects appeared frequently in the architectural journals and elsewhere. It shows his all-round ability as an artist that in more recent years he has turned his attention to water colours and has shown in this medium a high level of accomplishment, justifying an exhibition of his water colours at a London art gallery; though he tells a story against himself, with chuckling delight, of an art critic who said: 'Mr. Curtis Green would do better if he took three large ports before he started to paint!' These works are the products of his leisure hours, but they confirm what his many architectural works show, that we have in Curtis Green an architect who possesses a natural artistic sensitiveness and a quality of refinement which is refreshing in these days of rather crude and crashing art.

Curtis Green's architectural works are numerous and various. His first designs were built in 1898, just on fifty years ago. His works include power stations, churches, many houses, large and small, banks and city offices, hotels, schools and other kinds of buildings.

In 1912 Curtis Green went into a brief partnership with Messrs. Dunn and Watson and then practised again on his own, until in recent years he took into partnership his son and his son-in-law. His first period of independent practice included large power stations at Chiswick and Bristol, many small houses, including some at Hampstead and Romford Garden Cities, a house at Forest Row, won in a competition held by COUNTRY LIFE, and a church at Frensham. During his partnership with Messrs. Dunn and Watson, Curtis Green was engaged upon 300 cottages at Chepstow and 500 at Winchester, a bank at Bath, and Nos. 16 and 17, Pall Mall. Then followed a period of independent practice, during which he produced Wolseley House, Piccadilly, now Barclays Bank. This building was the first building to be awarded the R.I.B.A. London Architecture Bronze Medal, in 1922, for a building of exceptional merit. Then followed the Westminster Bank in Piccadilly and the London Life headquarters in King William Street, with its very fine furniture and fittings, done in a costly style which only a bank or an insurance company could afford, No. 6, Duke Street, the Lady Margaret School at Bermondsey, the Master's House at Radley, and St. George's Church at Waddon. Curtis Green's partnership with his son and son-in-law produced Stratton House, Piccadilly, and Stockgrove Park House, which I had the pleasure of visiting a year or two before the war; it is an enormous country mansion, with gardens, lodges, stabling, etc. I think it must be one of the last buildings of its kind likely to be erected in this country for a very long time indeed. Then came two large hotels, the Dorchester and the Queen's Hotel at Leeds, the Scottish Widows in Cornhill, with some beautiful interior work and furnishings and fittings, all designed by the architect, the Cambridge University Press building in Euston Road, banks in Bond Street, Spitalfields and Knightsbridge, churches at Farnborough and Stoke-on-Trent, and the addition to New Scotland Yard, of which he was responsible for the elevations only.

Many of these buildings are known to us here who are Londoners. They all possess the unmistakable stamp of sensitiveness and refinement, to which I have already alluded. In addition Curtis Green is a fine planner and a designer of furniture and the various fittings that contribute so much to the general effect of his interiors. His chairs, tables, electric light fittings, and so on, all help the effect of the rooms very much.

Curtis Green's large architectural practice has not exhausted all his energies, for he has found time to put in a vast amount of work for the R.I.B.A., on the Council and Committees and as Vice-President in 1923-24. It is a fine record, and Curtis Green is, I feel, a very worthy recipient of the highest honour that the R.I.B.A. can confer upon an architect. I should like, in conclusion, to congratulate him and to congratulate the R.I.B.A. on having his name on this distinguished roll of honour.

Mr. Curtis Green was then escorted to the platform by Sir Giles Gilbert Scott, O.M., R.A. (Past President) and Sir Percy Thomas, O.B.E., D.L., J.P. (Past President) and was invested by the President with the Royal Gold Medal.

Mr. W. Curtis Green, R.A.: It is five years since I was awarded the Royal Gold Medal. Sir Giles' remarks recall the emotion that I experienced at the announcement of that award. I anticipated at that time that I should have the ordeal of facing you alone on this platform, and I spent many hours composing an autobiographical thanksgiving. The years have mellowed all this, both for you and for me. You have been spared a tedious address, and I am fortified by the presence of many others whom you have similarly honoured. When, at the school which I failed to adorn, I was invited to visit the headmaster's study after breakfast for disciplinary action, I recall the comfort which it was to be one of a company of other delinquents, and now I am surrounded by others receiving the blue ribbon.

It is 53 years since I started an uncharted career as a student without the acquaintance or advice of a single architect. Since then I have done little more than work early and late. If we look back on those early years, it is obvious that the divine spark was fairly dim, but they were good days. There was the glamour of Bodley, Philip Webb and Lethaby. Lutyens was just beginning to get exciting and Giles Scott had started on his meteoric career. Whether I am among those few who have produced architecture I do not know.

The future is with you younger men. It is for you to create beauty out of the new problems, the new materials and new tools of your time. Austerity is forced upon us, a discipline that we need not deplore, because it may very well be our salvation. Someone has well said: 'Euclid alone has looked on beauty bare'. It is more than probable that all the great buildings of the world have a geometric basis.

I have tried to follow the way of tradition. I cannot accept the slogan that the past is a dead letter. Our roots are there, and if we cut the roots there can be no flower. Many of us have seen the works of our brother architects in the northern countries of Europe, which have borne fruit in this country, giving us both pleasure and hope. That freshness, that delight, is not a matter of artistry only. It derives, I feel sure, from an intimate and scholarly knowledge of tradition and craftsmanship, building in harmony with beauty that we have known.

I am happy in the knowledge that my partners, better educated and better trained than I was, will do better work. I am confident that such virtue as our later buildings possess is largely due to them, and I am very grateful to Sir Giles for mentioning the Scottish Widows, which is much more theirs than mine.

I cannot sit down without remembering and thanking the splendid staff who have worked so faithfully and so long for us, Mr. Addey, who has been with me for 37 years, and Mr. Soper, our secretary, for 35 years, who before 1912 was with my late partners, Dunn and Watson.

I should like to congratulate my fellow recipients of this honour. All of them are old friends of mine, and how much better I could have spoken of their work than of my own! What a ramp it would be if we each spoke of one another's work!

I should like to thank the President personally and my architect friends, whose friendship and fellowship I have enjoyed for so long, and, lastly, Sir Giles, secure in our affections, acclaimed and honoured as no other member of our calling, the same today as he was over 40 years ago, when I first knew him, but perhaps not hitting the ball quite so far. I hope that he will write my obituary notice.

The President: I call upon Mr. E. Maxwell Fry to speak on the work of Professor Sir Charles Reilly, O.B.E., Hon. LL.D., M.A., Past Vice-President, the Royal Gold Medallist for 1943.

Mr. E. Maxwell Fry [*F*]: What can I say of Sir Charles Reilly, who has been to me and to many others the St. Peter of an architectural heaven that lies about us still? That he is a teacher the like of whom we shall not see again? An influence? A tradition?

I will tell you how he appeared to me 25 years ago. It was my first lecture. I had by then exhausted a small library of works devoted to Gothic architecture, which had led me to the threshold of the classic world, where I hesitated, chilled by its severity, not knowing or realizing the life it served. That lecture of Reilly's was about the Forum

Romanum. What exactly he said escapes me, but I was given the impression of great walls that swung out of gloom into light and of forests of receding columns. There was an excitement conveyed by the indrawn breath of the speaker, half wonder at the glories departed, half wonder at still nobler grandeurs revealed. It was enough to fire my imagination and to set me running through that Roman portal into a world from which no architect escapes.

Those days of which I speak followed a great war, and returning soldiers would have been satisfied with the most rudimentary education so long as they could be made architects as rapidly as possible. What we got was much more than instruction; it was an atmosphere in which education flowered. Life was liberal, energetic, hopeful, and, to an extent that I have come to realize with increasing gratitude, it was centred on this man who gave so easily and with no condescension the overplus of his vital existence.

But you must have facts. Charles Reilly was born—— No! Not that kind of fact. He was slightly younger in some latter year of Queen Victoria's reign than he is now. At Cambridge, ageing but slightly, he took a first in engineering and talked politics with Keir Hardie. This wavering cost him dear, for so angry was the goddess of architecture that she arranged that he should spend the formative and profitable years of his life in the provinces, and after certain experimental periods had been fulfilled—a lectureship at King's College, London, and a partnership with Stanley Peach—he found himself in view of Waterhouse's sad-eyed, salt-glazed university, the Roscoe Professor of Architecture. That was in 1904. Thereafter he had his revenge upon the goddess. Starting with 20 students, he ended with 200 taking a full five-year course in architecture for a degree and drawn from all over the world, including London. Liverpool became the capital of architecture. Long before that time, the goddess had relented and had joined him in sweet friendship with Stanley Adshead and germinated the seeds of a school of civic design, enriched them with a princely gift from Lord Leverhulme and added as grace note a Mr. Patrick Abercrombie, who attends this evening for further honours.

Then Liverpool knew her days, for she found herself reflected in the glow of this man's enthusiasm for the full range of civic experience. To his help she owed a repertory theatre, housed not in barn-storming reach-me-downs but in a vesture of neo-grec architecture of rare merit; a students' club, where you might meet Augustus John, Diana Wynyard or Michael Redgrave, and a range of gossip that was a liberal education in itself for young architects of this school which was at once Liverpool's pride because of its success and her anxiety because of its unpredictable professor.

The school was in those days wretchedly housed. When I joined it was overcrowded and underlit, the lecture room was a dim parlour, the library an internal vault and the studios makeshift and provisional. But on the walls were original Piranesi etchings and in the library there were fine editions of Letarouilly and Choisy, from the latter of which I gained my first impression of the interdependence of material structure and architectural form, and through this shabby fabric there blew a wind of hopeful enlargement. On Monday we flung care aside to imagine strange and wonderful things for the Professor's sketch design subjects—a bed for the Queen of Sheba or a catafalque for Lutyens under the dome of his cathedral —and we listened together to the criticism that followed on Tuesday. We climbed in through skylights and dustbin openings to work over week-ends and into the night, until our nuisance value threatened to approach that of our indulgent professor, and we felt, I may say, the equal of 10 arts students.

Photographs of Sir Charles' earliest work, the St. Barnabas mission church at Dalston, show a grandly proportioned barrel-vaulted interior, and that is the building which I like to think of as proving that Reilly was impelled towards teaching by the strength of his feeling for architecture and not, like some, by failure. He might well have become as famous an architect as he is a teacher.

Were Sir Charles in my place now he would have told you of the prowess of his widely scattered students, and he may yet do that, but I will be Ariel to my Prospero and, encircling the globe, will tell them in Malta and Gibraltar, in India and Ceylon, America, Africa and China, in schools, colleges and offices numberless, in England, in Ireland, in Scotland and in Wales, that our beloved professor is this night crowned with the most illustrious laurels that his profession can bestow.

Left to Right: Prof. Sir Charles Reilly, O.B.E., Hon. LL.D., M.A., Mr. W. Curtis Green, R.A., Sir Lancelot Keay, K.B.E., President, Mr. Edward Maufe, A.R.A., M.A., Prof. Sir Patrick Abercrombie, M.A., F.S.A., Prof. A. E. Richardson, R.A., Hon. M.A.(Cantab.), F.S.A. [*F*]

Professor Sir Charles Reilly was then escorted to the platform by Sir Giles Gilbert Scott and Dr. Charles Holden and was invested by the President with the Royal Gold Medal.

Professor Sir Charles Reilly, O.B.E., Hon. LL.D., M.A.: I feel this honour very deeply, especially as I have been invested with it by the President, whom I have seen for years holding the fort in Liverpool. We owe a great deal to Sir Lancelot in Liverpool, and if he must have an Arthurian name he ought to be called Sir Galahad and not Sir Lancelot. I have heard nothing better of its kind than the speech that he gave to us just now.

My first contact with Liverpool was when I went in for the competition for the cathedral. I took there with me vast drawings for a great domed metropolitan cathedral in the middle of a flat town. The drawings were too large to go in a cab, and I saw the town for the first time sitting on them on a lorry. Later I saw the winning design, and realized how right it was, especially for its site on the edge of an old quarry. Ever since then I have been admiring the growth of the great masses that Sir Giles has produced. They are the grandest things in the town, and I think it was a great thing for the School of Architecture in Liverpool to have this imaginative building being erected there.

Owing to the position of Liverpool, it was a natural thing to go across the Atlantic, and it was my great good fortune to pay seven visits to America. I always arranged for my students to follow me. We managed even to get a waiver to the immigration laws in favour of the Liverpool School

with the help of Lord Derby, our Ambassador there, and the New York architects. I think Maxwell Fry, to whom I am so indebted for his kind words today, spent six months travelling all over the Eastern States and going even farther.

With regard to town planning, it is obvious that the relation of building to building must be part of such planning, and in my early days at Liverpool we soon began to think of that when we had got rid of the sheets of Gothic tracery I found the school copying on my arrival. Almost at once I asked Lord Leverhulme's help. It was very fortunate in those days to have a few rich men. I used to lunch with him every other Sunday, and put forward any proposition that I liked, on the condition that he could refuse it. He did not refuse all my propositions. He helped us with our school of planning. That was the first school of its kind in the country from which I like to think all the others, as well as the Town Planning Institute, have grown. Before that I had appointed Abercrombie, fresh from his student days, as my assistant, which I think showed some foresight, and when we had secured that fine philosophical architect, Stanley Adshead, as our first professor of Civic Design—the more civilized name we called Town Planning—he was given the lectureship and made editor of the TOWN PLANNING REVIEW at the same time, all of which Lord Leverhulme had provided. Very soon, of course, London did what Liverpool had thought of and founded its own school of town planning and Adshead, Abercrombie and now Holford in turn passed on to it.

I want to see more schools of architecture growing up. I want to see them in all our universities and in every town. A school of architecture means, or should mean, a standard of culture. It means, too, that there are, or should be, independent people, professors and teachers, who have an opinion and a standard of their own and who are not afraid to speak out for their art. Adshead and I, by writing in the Liverpool papers and lecturing about it, helped to save St. George's Hall, having the podium of its great north portico cut into for an equestrian statue of a plumed King Edward VII, and later Abercrombie and I got the Mersey tunnel entrance put in a more suitable place.

The teacher of architecture, I think, feels that his main work is opening vistas to his students, and his great pleasure in life, I am sure, is seeing how they fill them. Mine has been a long life, and I have had the happiness of seeing old Liverpool students doing great things everywhere. While, for instance, Abercrombie and Forshaw replanned London, and Holford the City, one is even about to replan Pekin, and Fry, whose words touched me so tonight, seems to have the whole of Africa at his feet. But there are Liverpool men everywhere doing grand things: such as the chief architects to the Ministries of Health in London and Edinburgh, the chief architects to big towns like Manchester and Southampton, the eight heads of big schools and not forgetting my dear old colleague Budden carrying the weight of a doubled Liverpool. Now this great Institute has added my own name to the list of Medallists carved in its entrance hall, which contains most of the best names in British and foreign architecture during the last hundred years. It is wonderful, and far more happiness than any man deserves, and especially to be the first man on such a list who has given up his life to teaching. I hope there will be many more in future, including my colleagues in London and elsewhere. I can only feel very grateful and not a little humble at the same time.

The President: I call upon Mr. H. Austen Hall to speak on the work of Mr. Edward Maufe, A.R.A., M.A., Past Vice-President, the Royal Gold Medallist for 1944.

Mr. H. Austen Hall [*F*]: It is my privilege to speak to you of the work of Edward Maufe. Those of us who have watched his career—most of us in this room have done so—will agree that it has been one of remarkable achievement. He has brought to English architecture a new note of beauty and simplicity, which has been deepened and strengthened as the years have gone by.

H. G. Wells said that 'the business of the artist is the enlargement of appreciation. He is the growing point of the species. He is perpetually expanding the field for the play of the human imagination'. How happily this describes what Maufe has done for architecture and for this Institute, to whose good hands the training of architects is entrusted. It is for this reason that tonight he is honoured with the Royal Gold Medal. It has never been better deserved.

Let us consider some of Maufe's works. Twenty-four years ago Maufe built the church of St. Saviour's at Acton for the Royal Association in Aid of the Deaf and Dumb. It is a very frequently illustrated church. It is very small and arrests attention by its distinction and not by its size. The interior is most surprising, because one is not prepared for the effect of size, which is due to the lovely proportions. The colour also is lovely. The reredos and roof are most gloriously painted, and these, with the decoration of the hanging lights of golden stars, make a picture which is not easily forgotten. This was Maufe's first church, and the promise of those days has been amply fulfilled.

St. Thomas's church at Hanwell is a much more ambitious scheme. The church was built in 1934. It is tremendously distinguished. It stands in a very commonplace suburban street of third-rate houses, and it looks an aristocrat. It has a lovely tower, and inside one is impressed by the immense apparent height, which has nothing to do with measurements; the soaring line of the roof and the very low aisles give an illusion as to size. There is a lovely colour scheme, from the reredos, which has been very cleverly painted in brilliant colours, down to the smallest details of church furniture. A recent visit which I paid to this church reinforced my first impression of its extreme beauty.

Maufe's greatest work is Guildford Cathedral. You all know how bravely that unfinished fragment crowns the slopes of Stag Hill. As one approaches it one is aware of the beauty of the scale of it and the beauty and freshness of the detail. The carving has been done by Eric Gill, and it will be difficult to find his successor. When one goes inside, again one finds the sense of space. Quite literally space is created. It is the magic secret of the architect. When I was there on a recent occasion I thought of the words of Bernard Shaw, who said, in an essay written 40 years ago: 'In the cathedral of brick and stone we may indeed discover the cathedral in ourselves'. In Guildford Cathedral there is very little trace of the antiquarian Gothic of the 19th century. The composition is traditional, but the handling of it is frankly modern. Maufe is sensitive to the past but equally sensitive to the needs of the present age.

Perhaps the most characteristic single feature of Guildford Cathedral is the extreme simplicity of the outlines. There are no unnecessary pinnacles, buttresses or projections. The parapets are plain and unbroken. The result is a certain clean-cut, modern, practical look, which to me is extremely attractive.

It is by his churches that Maufe is best known, but they are by no means his only claim to our attention. He has built theatres in both Oxford and Cambridge, the Festival at Cambridge and the Playhouse at Oxford. St. John's, Oxford, of which Maufe is an Honorary Fellow (a unique distinction for an architect) is now building another quad to his design, one which will harmonize admirably with the older work. Cambridge has the extensions to St. John's, half finished, as you know, but the completed portions take their place admirably in the civic beauties of the University. The harmonious grouping and the large bounty of the design and the unexpected planning are to me a very exciting and interesting revelation. The materials are very lovely; the combination of brick and stone is a thing to be seen and remembered.

Maufe has designed many charming country houses. His own house, Shepherd's Hill, in Sussex, is a beautiful adaptation of a Georgian nucleus. Yaffle Hill, near Poole Harbour, built for Cyril Carter, is notable for the use of faience and is designed in a very intriguing and exciting way, because of the extensive views which are given over the harbour. John Gloag has called it 'Modernity with Manners'. Kelling Hall, in Norfolk, is an early work of Maufe's in brick and flint, with a very beautiful garden. There are many other houses designed by Maufe, but time prevents my describing any more.

As Principal Architect in the United Kingdom for the Imperial War Graves Commission, Maufe is now carrying out war cemeteries and memorials all over the country. His aim is to make the burial places here as beautiful as those which we made overseas a generation ago. It is here that his knowledge of tree planting has stood him in good stead, and the effective disposition of his avenues will create a heritage of beauty for our successors, in the great tradition of the architect gardeners.

Some charming buildings in the cemeteries have already been completed, notably the Canadian pavilion at Brookwood. Do not fail to see it. It has recently been decorated with some very interesting murals.

Middle Temple and Gray's Inn have both employed Maufe for their rebuilding. The drawings of Gray's Inn have already been exhibited, and we can now appreciate how admirably he has caught the spirit of that once lovely place. There is a sense of restfulness and calm retirement in the designs for South Square, with its handsome library adjoining the Old Hall. I think that the very wide and low pediment he has introduced as a new feature gives a sense of brooding peace. I find that Maufe never uses a detail or a feature without expressing something by it, and in the design of Gray's Inn that added feature does enhance the peace and the beauty of the place. It is still the Gray's Inn that we love.

What is originality? It is not necessarily a departure from the old; it may be a building up on what has gone before. It is not a conscious avoidance of the past, which is negative. It is not wilfully new, which is provocative. It is what we bring which is constructive and positive, and not what we leave out, that really matters. In my view, originality is essentially a fresh contribution by a mind which is invigorated with its own power and its own activity. It is this fresh contribution which Maufe has added, in his own charming manner, to the treasures of our country, and for which we honour him tonight.

Mr. Edward Maufe was then escorted to the platform by Dr. Charles Holden and Sir Percy Thomas and was invested by the President with the Royal Gold Medal.

Mr. Edward Maufe, A.R.A., M.A.: It is a very real pleasure to receive praise from one's fellow architects, and I certainly thank Austen Hall very much for the too great praise that he has given me tonight. I must say, however, in passing, that the things he has said tonight are a little different from the things he has said to me when we have been alone together! I remember showing him a design quite recently; he looked at it for some considerable time and then said: 'H'm, not very good, Edward, is it?' Such remarks have their value.

My instructions, underlined in red, are to be brief. Therefore I will only say that I trust that this Royal Institute of British Architects, amidst the maze of subjects which have necessarily now to be studied by architects, will remember that architecture itself has their chief claim and that it is the architect's job to give shape to the formless and to make a harmony between the real that is and the ideal that reason craves to find. It seems to some of us older men that the Institute now is riding out on every sort of horse but is inclined to leave the winged horse of architecture in the stable.

It is delightful, Sir, to have received this high honour at your hands, you whose work I have admired for so long; although I have only recently had the good fortune to meet you. It has been very easy to appreciate a great personality. I thank you, Sir.

The President: I call upon Mr. J. H. Forshaw to speak on the work of Professor Sir Patrick Abercrombie, M.A., F.S.A., Past Vice-President, the Royal Gold Medallist for 1946.

Mr. J. H. Forshaw, M.C., M.A. [*F*]: It is my privilege and honour to speak of the work of Leslie Patrick Abercrombie. It is a vast work of many pages, and to speak briefly and yet make a summary worthy and adequate for this historic gathering is not easy.

I feel a certain sense of duty to past and present members of a famous School of Planners, and with it a great responsibility, because I am not speaking for them and myself alone; I am speaking for all those interested in town planning and civic architecture—student planners, planners in practice and men and women in public life in this country and overseas. Sir Patrick's interests and influence are not confined to Britain; they are international.

I have, therefore, to cover the widest field of planning, the city, the town and the village; the regional and national survey; the rural countryside and the industrial district. What are the broad divisions and diverse characteristics of all this activity? They are the monumental 'place' and the architectural street, the national park, landscape and coastal preservation, the youth hostel and the holiday camp. The detail of these divisions would fascinate us for many hours. It is not possible to cover the work of over 40 years in a few minutes, much less to take account of the far-reaching influence of 30 years' professorial direction in the Chairs of Civic Design at the Universities of Liverpool and London. How can I best analyze shortly the planning, the talking, the lectures, the writing, and the stirring conversation at meetings and conferences from London to Baghdad? The list does not only include plans for the capitals of England, Ireland and Scotland; there are also civic groups of buildings at home and abroad, as, for instance (as Sir Charles Reilly has reminded us), the design, in collaboration with Mr. Holiday, for the new campus at the University of Colombo. We find Sir Patrick Abercrombie also advising upon the capital of Ethiopia and upon those two famous islands on the route of St. Paul, one of vineyards and the other the great and proud island fortress. All these have been, at one time or another, in this amazing orbit.

In a brilliant career at Liverpool Sir Patrick Abercrombie prepared, as Research Fellow in the Department of Civic Design, studies for the four chief capitals of the Continent—Paris, Vienna, Brussels and Berlin—and these researches are even today the standard references, that of Brussels having been translated into the French language. In 1913 he secured, with two colleagues, his first notable success by winning the International Competition for a new town plan of Dublin. This marked early promise was followed by a long chain of writings in the TOWN PLANNING REVIEW, of which he was joint editor. The first English regional planning scheme, that of Doncaster, covering the South Yorkshire coalfield, in 1922, began a phase of work which produced a series of regional reports for the future development of well nigh half England, from Cumberland and the Lakes to Bristol in the west and to Canterbury in the east. In this period the Report on the Preservation of Stratford - on - Avon, prepared with his brother, the late Lascelles Abercrombie, was a happy coincidence. How admirably equipped and suited these brothers were for working together upon a report of Shakespeare's town—one architect, the other poet!

A disciple of that other planner and sociologist, Patrick Geddes, Sir Patrick Abercrombie was an established authority and a powerful advocate of planning for many years, before he came to London. He was President of the Town Planning Institute as long ago as 1925-26. By his work and authentic writings it was inevitable that he would come to London, and so in 1935 he accepted the Chair of Town Planning in the University of London. The phase of his regional reports was still unbroken, and he continued to work upon joint schemes, including those for Suffolk and for the Thames Valley preservation, and he threw himself with all his rousing enthusiasm into the organization and work of the Council for the Preservation of Rural England.

Sir Patrick has been a member of the Royal Fine Arts Commission for several years. His courageous Minority Report, issued with the findings of the Royal Commission on the Location of Industry, was of outstanding importance in the cause of good planning and was unique by its prevision.

The period of reconstruction has hastened the culmination of Sir Patrick's work with the preparation of many notable planning and redevelopment schemes, including the County of London Plan (in which I had the privilege of working with him as colleague and partner), the scheme for Hull, which he prepared in collaboration with Sir Edwin Lutyens, the scheme for Plymouth, followed by the Greater London scheme, which he prepared directly for the Minister of Town and Country Planning, and his present work for the City of Edinburgh.

In all this work, colleagues, staff and students have been thrilled by his vigorous personality, immensely influenced by his scholarship and, most of all, greatly moved by his generous mind and humility. The award of His Majesty's Gold Medal to Leslie Patrick Abercrombie has given, I am sure, the greatest pleasure and satisfaction to hundreds of fellow architects and friends in the British Commonwealth and throughout the world.

Professor Sir Patrick Abercrombie was then escorted to the platform by Dr. Charles Holden and Sir Percy Thomas and was invested by the President with the Royal Gold Medal.

Professor Sir Patrick Abercrombie, M.A., F.S.A.: I feel that in honouring me you have honoured the work of the planners of this country, because planning is, after all, a

co-operative piece of work. It is team work, and it is much more team work than is the individual design of a cathedral. The fact that you have chosen me to receive your highest award, which I accept in all humility, shows the interest that this Institute has always taken in the subject of planning.

It was in 1910, about the time when Charles Reilly was founding the School in Liverpool, that the great Exhibition of Planning was held by the Institute here in London. That was, I think, the beginning of the serious study by this Institute of the subject of town planning. In all the work which I have done since then it has given me pleasure and delight to work with a team of people who have really been just as much responsible as I for the results that have been obtained.

Sir Charles Reilly has already said, quite truly, that he was the first to direct attention, in the way of teaching, to the rôle that the architect can play in planning. I think we all agree about the rôle of the architect in planning. After all, the public are interested in what they see. They are not really interested in our plans, and our two-dimensional plans can be realized only by some form of architecture in its most extended sense, in the sense of architecture as the design of towns and the planning of the countryside. Landscape design is allied to architectural design, and the treatment of those utilitarian features, roads and bridges, is a part of architectural design. It is there that the architect has come into the picture and played his part in the revival of planning in this country.

There is, I think, an even wider and fuller way in which the architect can contribute to town and country planning. We as artists are supposed to have vision and to see things before we put them down on paper, and it is that long distance view, that ability to foresee the future, which is the special contribution that architects can make to this subject. The greatest danger with which we are faced today is the short term plan, the immediate housing programme, whose sponsors can brook no delay to see whether the houses are placed in the right position. This may cause things to be done of which we shall repent in the not too distant future, and the architect must bring to bear the long distance view on the subject of planning, a subject in which the war has given us even greater opportunities than we had before. We must insist that the long term projects are not damaged or destroyed by short-sighted Treasury officials, who say that there cannot be a space in the middle of a road because then the road will cost more than if it was only just wide enough for the traffic. I mention that instance because it has come within my own experience quite recently. One ought not to be topical on these occasions, but it is impossible to avoid it.

I should like to say how much I have enjoyed my work as a professor. I agree with my brother Lascelles that neither of us was born a teacher, as Reilly was. We often used to say that to Reilly it was a joy and a natural evolution of his being to teach and to run a school. To my brother and me it was a labour, and, although it brought us great pleasure in the long run, it was not our natural metier. I cannot give lectures and produce diagrams on the spur of the moment; I have to work hard at them. I remember the labour I had in the early days, when Reilly called upon me to lecture on stresses and strains and I knew nothing whatever about them.

It gives one pleasure, as Reilly has mentioned, to see the results of one's teaching in different parts of the world. Quite recently I was asked to give a talk in Egypt. We have been told that we are not very popular in Egypt, but very large numbers of architects and engineers came to listen to my talk on English planning, and one or another came to me afterwards and said: 'I was not your student actually but I was Reilly's student'. I think about 18 very fine-looking, portly, extremely prosperous architects, who had passed through various schools and were members of the R.I.B.A. or who had studied and worked here, came and spoke to me, and what a pleasure it was to meet those people! Those are the rewards which those of us who have engaged in teaching reap.

The award which you have bestowed upon me this evening is one which I shall value and treasure as the highest honour that it is possible for anyone to bestow upon me, and I thank you.

The President: I call upon Mr. Arthur J. Davis to speak on the work of Professor A. E. Richardson, R.A., M.A., F.S.A., Past Vice-President, the Royal Gold Medallist for 1947.

Mr. Arthur J. Davis, R.A. [*F*]: The ancient Greek philosopher Simonides was reputed to have said about 3,000 years ago that he had never repented of having held his tongue but often of having spoken. I think some of you will agree with that old gentleman. We have had a spate of eloquence tonight. This advice was sound, and I have endeavoured to follow it for many years, but I am happy to break my silence this evening, on this memorable occasion, in order to pay my tribute to my old friend Albert Richardson, whom we are delighted to honour and whom I now have the great pleasure of presenting to you.

It will not be necessary for me to give you a detailed catalogue of Richardson's works and achievements. Many of his activities, apart from the practice and teaching of architecture, in which he has been engaged so long and so successfully, are well known to all of us, but I will briefly enumerate some of the important buildings for which he has been responsible.

Richardson started the study of architecture when he was in his teens—at 13, I am told. As a young man he worked for Leonard Stokes and afterwards in the office of Frank Verity. For many years he practised in partnership with Charles Lovett Gill, under the name of Richardson and Gill, his firm being awarded the R.I.B.A. Bronze Medal for Sanderson's warehouse in Wells Street, as the best London building of the year 1931.

Among the important buildings that Richardson has designed are the Royal Pavilion, Ascot; the Jockey Club, Newmarket; the new buildings of the University College, London, and the library and choir stalls of York Minster. He has specialized in the restoration and reparation of many churches, ancient buildings, country houses, schools and institutions. He designed the R.A.F. monument in Westminster Abbey and the North London Collegiate School, Canons Park, and he was the architect for the Duchy of Cornwall.

Richardson has written several definitive works on architecture, notably *Monumental Architecture of the Eighteenth and Nineteenth Centuries in England and Ireland*, *The English Inn*, *Georgian Life* and *The Smaller House of the English Renaissance*, and he is now bringing out a book in collaboration with Professor Corfiato, entitled *The Art of Architecture*.

He was elected A.R.A. in 1936 and Academician in 1944. He is a Vice-President of the Georgian Group and of the Society for the Protection of Ancient Buildings, and he is an acknowledged authority on mediæval art and English architecture of the late Renaissance. In my opinion, he knows more about the French artists and architects of the 18th century than any other man in this country. Of course, we know him as an enthusiastic and eloquent lecturer, often illustrating his statements with brilliant sketches. As a draughtsman, we have all admired his imaginative drawings which used to delight us when they appeared in the BUILDER, and lately he has been exhibiting some very charming water colours on the walls of the Royal Academy.

In his teaching he displays no antagonism to the modern outlook; on the contrary, he is entirely sympathetic to new ideas in every form when these are interpreted with sanity and logic, but only then. Recently he has retired from the direction of the Bartlett School of Architecture at the London University, after having held the Chair for nearly 27 years (a record, I believe), and has been succeeded by his devoted admirer, Professor Corfiato.

I have spoken to you of Richardson the architect, and now I want to say a few words about Richardson the man. He lives at Ampthill in Bedfordshire. His house is a beautiful 18th century one, overlooking the main street. If you are fortunate enough to be invited to lunch there you will spend a memorable afternoon. Mrs. Richardson will receive you in her drawing-room, which is full of period furniture, rare prints and musical instruments. Richardson will probably offer you a pinch of snuff and dress up for you in Regency costume—wig, flowery waistcoat, knee breeches, white stockings and square-toed shoes with silver buckles. If your car happens to be enamelled a primrose yellow, as mine was, he will insist that it remain outside his front door, to impart the necessary Rowlandson touch to the scene. He will show you his magnificent library, and it may be that his daughter Catherine will play you a minuet on the harpsichord to round off the visit.

In London, at his club, Brookes in St.

James' Street, or if you accompany him through the squares and streets of the West End, as I have often done, he will entertain you with a hundred amusing anecdotes, as he knows intimately every building and the history of every street in the capital. I remember that on one occasion, before the first world war, we were strolling together through Berkeley Square. (You do not walk with Richardson; you stroll.) When we passed Robert Adam's Lansdowne House, now demolished, Richardson pointed to the severe entrance gates, with the elegant Ionic façade behind, and said: 'Davis, look at those magnificent doors with their great bronze knockers. How that smacks of aristocratic insolence!' Alas, Devonshire House and Lansdowne House are no more! The famous square is no longer trim and well kept, with its elegant Georgian railings, its trim privet hedges, its smooth lawns, which served as a fitting background to the gambols of small children with their prim nursemaids and Pekinese dogs. The nightingale no longer sings in Berkeley Square, and commercialism has invaded what is left of fashionable 18th century Mayfair. I am sure that no one regrets its passing more than our friend Richardson. However, the picturesque little Chinese pavilion under the plane trees still graces the centre of the Square, and I fondly hope that when I die I shall be buried under it.

I should now like to give you a piece of good news. The Royal Academy School was, as you know, blitzed in the war; masters and pupils were dispersed and the future of that institution was for the time being in serious jeopardy. Recently the architect members met to consider the future of their school but could not formulate a policy. It was a case of whom to teach, when to teach, where to teach, what to teach, by whom to teach and, finally, why to teach at all. They could not decide. They knew that it would be dangerous to make a false start, and retreat was unthinkable. Then Richardson stepped into the breach and all our doubts were at once dispelled. He volunteered, in his usual generous manner, to take complete charge and to direct the teaching. With his long experience and the assured respect and admiration of his colleagues and former pupils, his success was a foregone conclusion. I think we need have no fear for the future of the R.A. School, for who is better qualified to undertake the task of directing it than the man who once penned the following lines on how to become a successful architect:—

'Mutules in your cornice,
Acanthus round your door,
Small bars in your windows
Three feet from the floor.
Georgian in the country,
Neo-grec in town,
That's the stuff to give them
If you seek renown.'

Mr. President, I fear that I have already exceeded my time limit, and I do not wish to join the black market in eloquence. I will therefore conclude my remarks and will now perform my pleasant duty of presenting to you my dear friend Albert Richardson. I am sure that all here will support me, as would many who are not here, when I say that we hope that the noble work he has done and is still doing for the advancement of the Mistress Art will bear abundant fruit. May his undertakings prosper, may he long retain the love and esteem of his countless friends and may the shadow that he casts on the pavements of his beloved London Town never grow less!

Professor A. E. Richardson was then escorted to the platform by Sir Giles Gilbert Scott and Sir Percy Thomas and was invested by the President with the Royal Gold Medal.

Professor A. E. Richardson: I have been told to be brief, but I am practically speechless, much to your relief, I am sure. On these occasions it is best to indulge not in brilliancy but in brilliant flashes of silence.

The official records of Birkbeck College state that I was a lecturer there at the age of 17, in 1897. I am very proud of that. When I went to Cambridge teaching students, rather late in life, I spent six years of hard work there, and when I looked out of my window and saw Queen's College opposite I said: 'My ambitions are fulfilled'. I am now, with Professor Abercrombie, an Honorary Fellow of St. Catherine's College. I am not here tonight to tell you of my career. Far from it. I feel rather like one of those penitents of the past who, clad in a white sheet and carrying a flickering candle, listened to pardon for past omissions. When I listen to the account of the careers of others I feel how little I have done, but I take pride in the fact that I am still a professor, and I hope to die as I began, teaching architecture.

Those are the main facts, and now for the homily, because this is an occasion when one is in the pulpit and can deliver a homily. I never forget that an ancestor of mine, educated at Cambridge in the 16th century and burned at Oxford, was a great preacher. He came from Northumberland, as my people did. I do not want to bore you. When a man attains to years of maturity he realizes his indebtedness to those well-wishers, friends and colleagues, who helped him. I want to pay a tribute tonight to those who have stood by me in the breach and fought the good fight for more than a quarter of a century, particularly my dear friend Corfiato. I also wish to pay a tribute to those zealous critics who have pricked me on, because they deserve some praise for their purpose and their tenacity, and I would also administer to them a good lashing, which they also deserve for their failure.

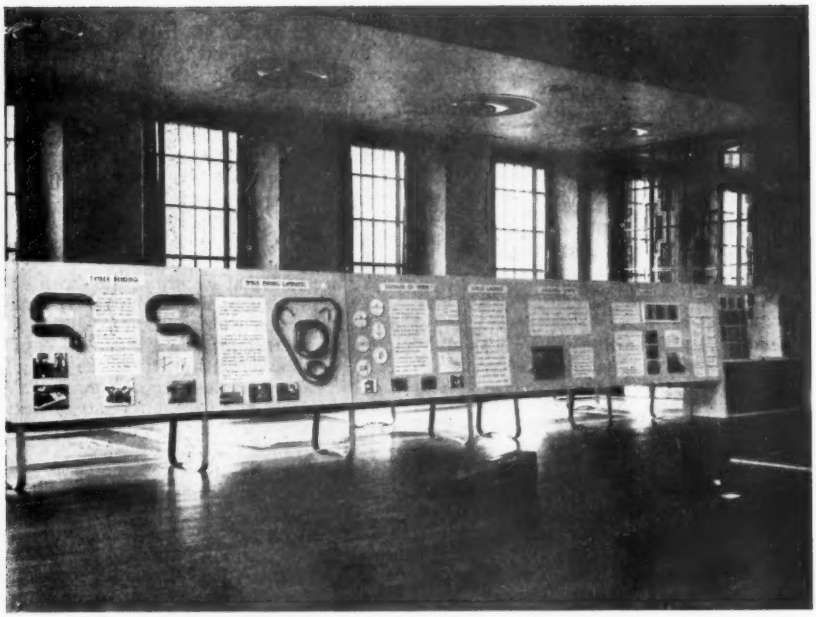
This is not a time for self-gratification; far from it. It is a time for renewal of allegiance to the art that we all profess. The spirit of this Institute lives on through its founders, unchanged, in spite of modifications and in spite of all that the world can do and attempt to do to alter things. The spirit of this Institute is constant, and it will continue to modify the aspirations of all who join it. It is the fraternal qualifications which are of the first importance, not the competitive, not the jealous, not the scornful. There are many who curl the lip of scorn when I face them. Nothing succeeds like disinterested attachment to an ideal. That is why 'the rank is but the guinea's stamp', a mere token value.

We are told that we are at the dawn of vast social changes; in fact, some say that these changes have already come. Although instability is without doubt a condition of living, we should remember that everything is subject to ceaseless modification. Reilly has told us that he changed his taste rat her late in life. Sometimes people change too late. All advance, the most beneficial as well as the most evil, is as well regulated as the swing of the pendulum of one of Tompion's clocks.

I feel tempted to say that the conditions which confront us not only represent those which have gone before but actually foretell those which will follow. The future that awaits us will grow out of the present, whether we like the idea or not. Substitute other words if you feel disposed to do so. It is inevitable that this interfusion of thought predetermines the tenacity of type, whether in cult or in persons. That this law—it is a great natural law—fails to placate those eager spirits whose minds are obsessed with originality or those whose heads are filled with a desire to benefit their fellow beings is not to be wondered at, because it is a law similar to the law of compensation; it has a universal bearing and we have to put up with it.

As architects we have our duty to perform, and my advice to you is *sursum corda*, lift up your hearts. In spite of adversity, go on believing; have faith in art; continue to contribute things which are beautiful as well as useful; do not disparage beauty. Do not label your work; do not say: This is so and so, and this is so and so. We are sick of substitute marmalades. We want the real thing, the real fruit. We must not expect dazzling successes; dazzling successes are very dubious. Success is reserved for the immortals. You have to die before success comes. Strangely enough, we have to rely on ourselves to contribute something for the benefit of those who alone are destined to brighten the future, our future which we shall never see.

That is the homily, and now I would conclude by thanking you, Mr. President, for this great honour. I also thank you for giving me the opportunity of speaking on this occasion.



A view of the exhibition in the Henry Florence Hall

The F. P. R. L. Exhibition

Success of 'Timber Research in Building' at the R.I.B.A.

WHEN THIS exhibition was first suggested there were some who doubted the wisdom of trying to 'put across' a scientific subject by means of an exhibition. Further, such an exhibition would have very little appeal to the general public, and was, therefore, outside the usual field of R.I.B.A. sponsored exhibitions. On the contrary, it would be severely technical and limited to architects, architectural students and others interested in the use of timber in building.

That all these fears were groundless was proved by the good attendance of keenly interested architects and students who kept the representatives of the Forest Products Research Laboratory continuously busy answering questions. The total attendance was 4,000 of whom not more than a few dozen were members of the lay public; the daily attendances increased steadily as the fortnight progressed. A large proportion consisted of students from schools of architecture and schools of building; many came more than once and some came while their instructors did not! The Exhibition Committee is to be congratulated on their wisdom in arranging this purely technical exhibition and F.P.R.L. on the skill with which an abstruse subject was 'put across'. Specially to be congratulated is Mr. E. H. Nevard, Deputy External Relations Officer of F.P.R.L., who designed the exhibition, put it up and attended every day.

The exhibition was given a good send off when it was opened on 28 April by Mr. H. S. Goodhart-Rendel [*F*]. The chair was taken by Mr. J. Murray Easton, Vice-President, who deputised for the President. In declaring the exhibition open Mr. Goodhart-Rendel said : English builders have always been great users of wood. I suppose that no other country has shown the same variety of remarkable wooden roofs of mediæval churches. Even in the 18th century, and later, a great deal was done with wood in our building that across the Channel was done by the mason, and even until the recent war we found a surprisingly large use of wood in this country for a country which has been so largely disforested.

Today wood has become more precious than rubies, and when we read the old specifications which we used to write they seem rather like the recipes of the old cookery books, which began 'Take sixteen eggs and six pounds of butter.' One wonders whether those days will ever come back again. I am assured by those who are the best prophets that they will not.

It is extremely important, therefore, that everybody who has anything to do with the use of structures should learn how to make the best of what wood he can get, and above all, how to choose and use the right material. He must also know what I think a great many of us have had only a very slight acquaintance with in the past, how to prevent and how to cure the diseases to which wood is liable when it is unfairly treated.

This exhibition, I think, ought to mark almost a new epoch in the acquaintance of architects, engineers and builders with the material which they use. An astonishing amount of research has been going on at Princes Risborough, and a great many of us have not availed ourselves of it. We shall have no excuse for that at all after this exhibition, which is not only attractive to look at but most informative; I have taken the greatest pleasure in going round it.

Although I do not profess to know all the books in the Institute's library, I understand that very little has been written so far, compared with what has been written about other materials, on the scientific use and nature of wood. I think that the publications of which you will see a certain number here are the beginnings of what should be a flood of literature on the subject, because we have to be very careful of our wood in the future and not waste any or use the wrong wood for any purpose.

I am told that the Forest Products Research Laboratory has made this extraordinary progress in the short space of 25 years. I hope that we shall really avail ourselves of the amount of knowledge which they have accumulated, and also keep in touch with them for further discoveries which may be made. I am told also that they are very glad to answer questions and to put all their information most generously at the disposal of any inquirer. In fact, they welcome such inquiries, because very often they call to their attention some point on which architects or engineers need information which otherwise might not have occurred to them.

Sir Edward Appleton, Director of the Department of Scientific and Industrial Research, in thanking the Royal Institute and Mr. Goodhart-Rendel said:'I should like to thank, on behalf of the Department, the Royal Institute of British Architects for two things: first, for suggesting that this exhibition on timber and its uses should be held, and secondly, for being so generous as to provide us with these excellent facilities for demonstrating our work and our wares. It is characteristic of the Royal Institute to do this because it has always in the past been ready to help us in making public our work and in providing us with a forum for scientific discussion.

I should also like to thank our Chairman, Mr. Murray Easton, who is a Vice-President of the Institute, for presiding over this gathering today. Speaking on behalf of the Forest Products Research Laboratory and of the whole Department of Scientific and Industrial Research, I should like to say that we count his presence here today as a very welcome symbol of R.I.B.A. approval of what we in the D.S.I.R. are trying to do.

As Mr. Goodhart-Rendel has said, it is a great problem today to make the most economical use of timber, but I will end by saying that we look forward to a time when it will be in greater supply than it is at the present time.

Scientific Research on Alternative Methods of Construction for Permanent Houses*

Part 2

by R. Fitzmaurice, B.Sc., M.Inst.C.E. [*Hon. A*]
Deputy Chief Scientific Adviser, Ministry of Works

The Houses Themselves: There are limitless possibilities in the development of new forms of construction for houses, but in point of fact it was soon found that the range of what was practicable began to narrow itself. For large scale prefabrication of building elements it would be natural first to look to wood and steel as the basic materials which would lend themselves most readily. Unfortunately, wood has become a very scarce commodity in Southern and Western Europe and Great Britain is no less affected than many other countries. Steel has so many uses as the basic material for so many industries that it was soon apparent that wide development of the use of steel for houses would tend to create a shortage which might prove a serious embarrassment to other vital industries. These considerations led naturally to a focusing of attention on concrete constructions, and it is to concrete houses that the largest amount of work has been devoted. Concrete has many advantages in that it is familiar to the public, and can be highly durable, it requires a modest amount of coal in manufacture of its constituents, it can be made to very precise dimensional limits, and by varying the mixes, etc., its properties can be adjusted over a very wide range.

Most of the new systems of house construction which have been brought forward in Great Britain are characterized by their method of walling. In many of the systems it would be possible to use various alternative floors and roofs without losing their essential character.

The main types of permanent houses under development fall into the classification set out in Table 1.

In addition to the houses mentioned in this classification, a certain number of other types have been the subject of development groups, but for various reasons the large amount of work involved in the complete analysis of the data obtained was not considered to be justified. It should be noted that various other new types of permanent houses are being built in Great Britain in addition to the ones which have been the subject of these experiments.

The House Plans: For the purpose of this experiment, where it was desired to obtain the maximum possible amount of information about a number of different types of construction, it would have been ideal if an identical plan could have been used for all development groups. This was not possible for various reasons. Some of the constructions themselves were such as to call for a module in the spacing of their wall elements, and these spacings differed considerably. Moreover, the development groups were built in different parts of the country, where the population has different ways of living, so that an identical plan, if suitable for the southern counties would have been objectionable in the north. So far as possible the floor areas of the houses were kept constant and the house designs based on a range of standard type plans Allowance has had to be made in the analysis of the results for differences in the plans and in the equipment of the various houses. Experience in the experiments has shown that variations in planning and equipment do in fact increase very materially the amount and complexity of the work of analysing the results, and will always tend to obscure the fundamental differences between constructions which is the main object of work of this kind. It would be desirable in any further experiments of this kind to subordinate drastically all differences in design other than the main constructional features which are the subject of study. Any variations admitted, whether to reduce monotony in architectural treatment of the group of houses, or to accommodate local preference for certain plan forms, should be carefully studied statistically in advance. The variations introduced in the site observations due to such causes must be amenable to analysis.

'No-fines' Concrete Houses: 'No-fines' concrete was developed in Holland shortly after the war of 1914–18. It was introduced into Great Britain in the early 1920's, and made a useful contribution to the housing shortage at that time. The houses then built are still in service, and so far as is known,

TABLE 1

Type	Main Features	Designation	Weight of units in lbs.
Concrete cast in situ.	'No-fines' walls.	I	
	Cavity walls; dense concrete exterior; clinker concrete interior.	II	
Precast concrete. Post and panel; small units which could be manhandled.	Reinforced concrete posts of dense concrete; covered externally with dry-jointed precast concrete slabs; lined internally with plasterboard on wood fillets attached to the posts.	III	Posts .. 70-80 Slabs .. 37 Corner slabs 42 Floor beams 37
	Reinforced concrete posts of air-entrained concrete; covered externally and internally with air-entrained concrete slabs.	IV	Posts .. 222 Slabs .. 104 Transoms .. 113
Large units requiring cranes for erection.	Foamed slag concrete units of about 2 sq. yds. in area; covered externally with briquettes to simulate a brick wall.	V	
	Large wall units full storey height and up to 3 or 4 sq. yds. in area; lined internally with plasterboard and subsequently with wood-fibre-cement slabs.	VI	Largest wall unit .. 630 Band course unit .. 1,230
Steel framed.	Light steel frame covered externally with precast dense concrete slabs and internally with plasterboard on timber subframes.	VII	Stanchion .. 124 Roof trusses 173 Slabs .. 105
	Hot-rolled steel frame and roof members; covered externally with dense concrete slabs and lined internally with wood-fibre-cement slabs and plastered.	VIII	Main wall panels .. 184
	Hot-rolled steel frame and roof members; covered externally with metal sheet on timber subframe and lined internally with plasterboard.	IX	Main wall panels .. 700
Timber framed.	Light timber frame covered externally with precast dense concrete slabs and internally with plasterboard.	X	Wall unit .. 230 Floor unit .. 200 Roof trusses 74
	Light timber frame covered externally with steel sheet and internally with plasterboard.	XI	

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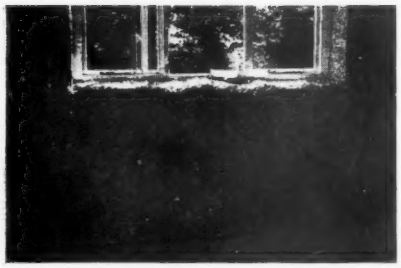
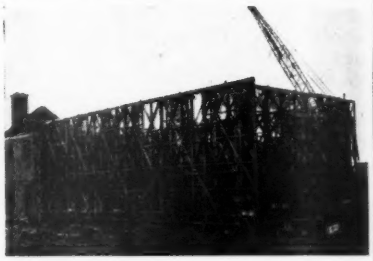


House No. I of 'No-fines' concrete. Left: the texture of the walls. Right: large panels of timber shuttering lined with expanded metal



have not given serious trouble. When the traditional building industry began to relieve the acute shortage of houses this form of construction dropped out, until it was revived in Scotland in the years immediately preceding the last war. Some very successful results were obtained. The main advantages of the system are twofold:
(1) The 'No-fines' concrete has a structure which does not provide continuous capillary channels to conduct rain from the outer to the inner face. In consequence, it is easy to be certain that rain will not penetrate the walls even if a certain amount of cracking does happen.
(2) The 'No-fines' concrete does not build up a fluid pressure in the shuttering, and consequently it is possible to pour the concrete in considerable depth in relatively light shuttering.

Certain precautions are desirable in use. The 'No-fines' concrete has low shear strength, and any deficiency in foundation design will tend to show up badly in the form of cracking. Bad sites, such as make-up ground or ground liable to mining subsidence, should be avoided. The thermal insulation of 'No-fines' concrete depends on the type of aggregate. With dense aggregates the thermal insulation is poor and walls need to be thick or, alternatively, heat insulating linings need to be provided.

Two development groups have been carried out in 'No-fines' concrete. The first, House No. I, which is now complete and for which site data are given in the following section, has been reduced to a highly mechanized procedure. The main features are illustrated on this page. The shuttering is in large units which are transported and erected by crane, and they simultaneously provide a working platform for the pouring of the concrete. The concrete is delivered direct from the mixer to a hopper on the shuttering by the same crane, so that the concreting gang is a small one. This method calls for a high degree of site organization to keep expensive machinery in continuous operation and to keep gangs of labour in the correct balance. The result when this is done is considered to be very satisfactory and the aggregate amount of labour and the proportion of skilled labour are likely to be very appreciably below those for traditional construction in brickwork.

The other development group in 'No-fines' concrete is not so far advanced. Normal standard shuttering is used and considerable time and money is occupied in erecting and dismantling it. The operation of pouring and distributing the concrete is less highly organized, and first results from the site are not very encouraging. The site data are not yet sufficiently advanced to give any results.

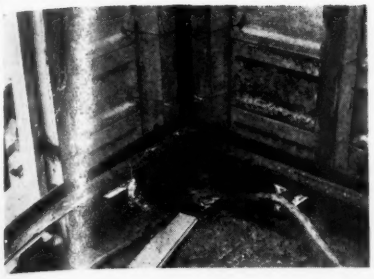
Cavity Wall Construction in Poured Concrete: The other poured concrete system, House No. II, which has been developed for housing is again one with which there is considerable pre-war experience. It depends upon a special system of steel shuttering which has been designed to give a cavity wall with 3 ins. of dense concrete externally and 3 ins. of clinker concrete internally. Shrinkage cracking is controlled by horizontal steel reinforcement in the dense concrete outer leaf of the wall. A large number of houses was built by this system in the 1920's and have been entirely satisfactory. The houses are finished externally with cement rendering, and do not look any different from any other cement rendered houses. The development group has given encouraging results. The Labour requirement is appreciably less than for the traditional brick house, and the percentage of skilled labour required is markedly less. The contractor responsible had considerable experience with the systems, and the work was well organized on the site. Apart from the special system of shuttering, which is the essence of the system, no special equipment was used and the concrete was mixed in a normal mixer and distributed by labourers. It was placed in the shuttering by hand in small quantities.

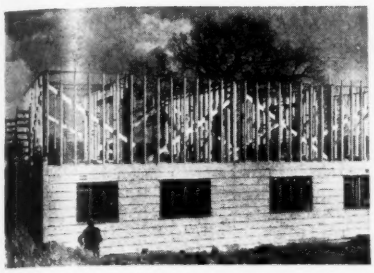
One other poured concrete system has been the subject of experiment in this series, but did not prove to be as economical as had been hoped, and the recording of site data was discontinued since it was obvious that costs were going to exceed considerably the cost of traditional constructions. This experience, together with the unsatisfactory results being obtained from one of the 'No-fines' concrete sites, indicates clearly that poured concrete constructions call for a high degree of organizing ability if economical results are to be obtained. Every stage of the construction—the erection and dismantling of the shuttering, the mixing and distribution of the concrete and the placing of the concrete—must be closely studied, and optimum conditions and balance of the labour force must be achieved. If expensive machinery is used, it must be kept working continuously, and the site must be organized for this.

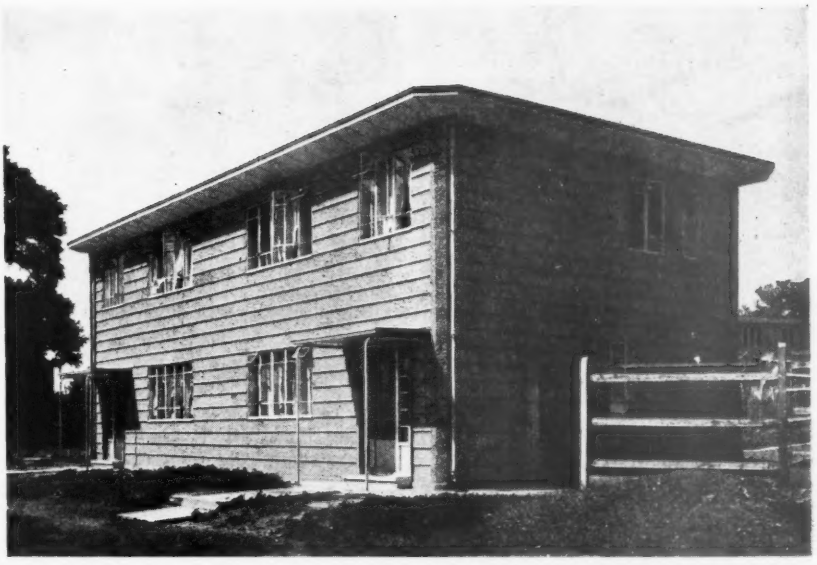
Precast Concrete Systems. Two systems of posts and panels, with small units capable of being handled by one or two men, have been the subject of development groups. Both have many novel features, and have been reduced to a high degree of simplicity with a small number of components. Both have given very satisfactory results on sites as will be seen from the figures reported.

It is not proposed here to discuss any of these systems in minute detail. If anybody wants complete information on a system it will be supplied on application. The discussion is limited in this paper to the essentially novel features and those on which success or failure has been found to depend.

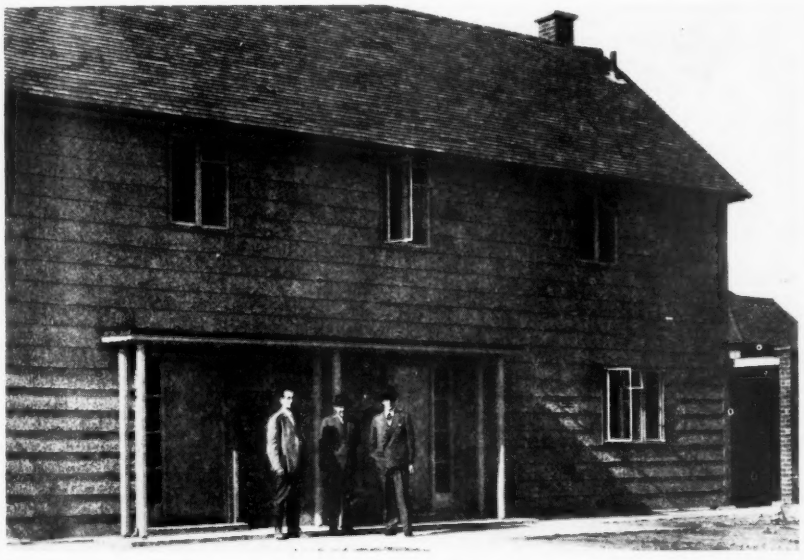
Taking the systems in ascending order of size of units the first is House No. III. This house is designed to rest on any level

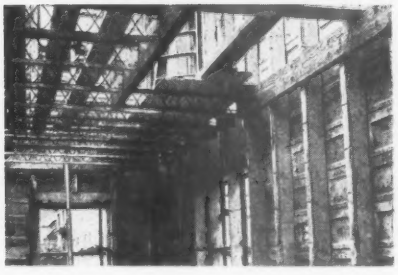






Above and below. House No. III of small pre-cast concrete units. The two large photographs show the flat roof and pitched roof types completed. Top left: posts resting on foundation concrete with steel jig which positions the posts; lower storey covered with concrete slabs and posts erected for upper storey. Bottom right: the slabs are fixed to posts by copper wire; the upper floor joists are of light steel lattice construction

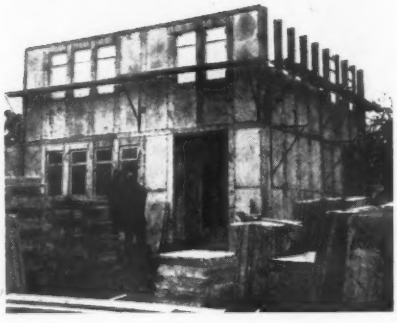




foundation. The walls consist of precast concrete posts which are positioned at their feet by a simple steel jig, and at their heads by a removable steel strip. The posts are storey height and they rest upon the foundation without any kind of fixing whatever. Externally the walls are covered with precast reinforced concrete slabs laid dry and wired to the posts with copper wires attached to copper hooks embedded in the slabs. Each course of slabs overlaps the course below so giving a weathered joint which sheds the rain. The vertical joints which are also without mortar occur always in front of a post. The slabs are bedded against the posts on a layer of bitumen which assists in giving a waterproof seal. It would be unwise, however, to assume that a bitumen layer would give a permanent seal for a period as long as the life of a house. Early experiments without the bitumen seal showed that there was some penetration of water at the vertical joints in heavy rains, but that it ran down to the foot of the walls without crossing to the inner face of the posts. The posts have small wooden fillets attached to their inner faces and fibre glass insulation has been attached to these with a lining of plasterboard. The posts of the second storey are connected to those of the first storey by metal dowels.

The floor beams are built up of light steel lattices with light wooden fillets at top and bottom to which wooden floor boards and plasterboard ceilings are attached. The floor beams are bolted to the wall posts by a pair of bolts at each end. Metal windows are used in conjunction with special posts, tapered to form window mullions.

The system is illustrated above, and it will probably be agreed that the house is a handsome one. The wall slabs are amenable to a very wide range of æsthetic treatments. For the houses illustrated an exposed aggregate finish has been provided. This follows the technique which was developed by the Lods-Mopin partnership of Drancy and elsewhere. It will be obvious immediately that any success with a system such as this depends on the accuracy of dimensions of the concrete units.



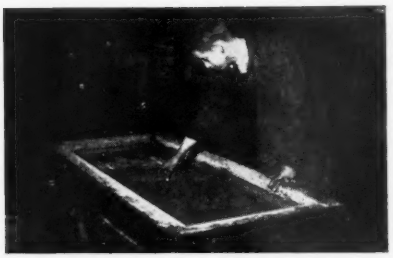
House No. IV of air-entrained-concrete beams and slabs. Top, L. to R.: putting a wall panel in place; tightening a wall panel; first floor joists in position on steel hangers. Left, L. to R.: the first floor when fixed forms a platform for erection of upper storey; completion of the upper storey; note the steel brackets to carry the working platform. Below: a completed pair

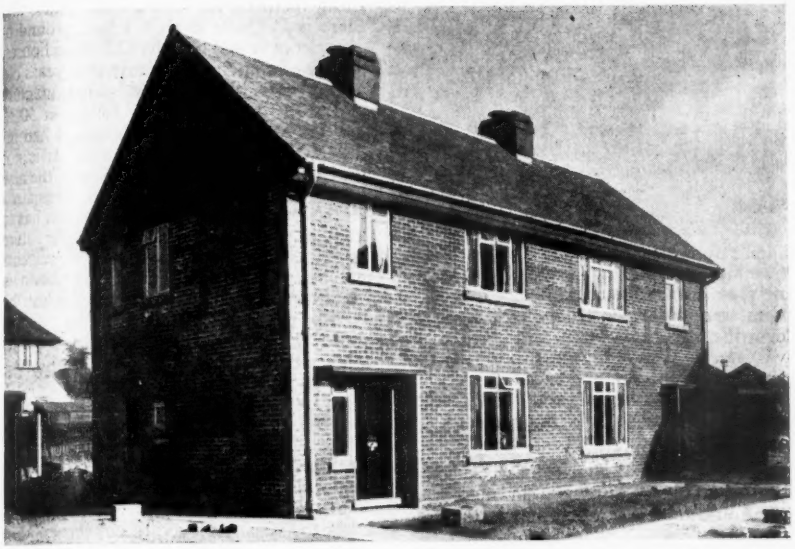
There is no mortar bedding to take up any inequalities in the slabs or deviations from straightness in the posts. The tolerances specified are $\frac{1}{32}$ in. in the length of the slabs and $\frac{1}{32}$ in. in their height. After the first few house sets were made there was no difficulty in maintaining the required tolerances, though it was convenient to keep available a small stock of slabs and half slabs which were slightly short in their length.

House No. IV uses for beams and slabs an air-entrained concrete of a density of 80–90 lb. per cu. ft. These units are reinforced to restrain shrinkage movements and to enable them to be handled. Galvanized steel sleeves are cast into the slabs and posts, and connections are made by bolting through these sleeves. The reinforcement in the posts and slabs is hooked round the sleeves. The posts are cruciform in plan, and the walls consist of outer and inner slabs giving a flush exterior and interior. No mortar is used in erection of the posts or slabs. There are horizontal members at ground, first floor and eaves level also of air-entrained concrete. The walls are covered externally with cement rendering. Internally the joints are covered with a strip of copper fabric embedded in plaster preparatory to finishing with a single plaster-coat. Owing to the accuracy of the manufacture of the wall units the interior can easily be finished in a single coat of plaster. Here again the watertightness of the wall depends upon ensuring that any rain which penetrates through the outer slabs can drain away to the foot of the wall where suitable outlets must be provided. The autumn of 1946 provided almost continuous heavy rain and gales in Devonshire where the development group was built, and the houses have had a very severe test indeed. Dimensional accuracy is absolutely essential in these houses, and has been controlled by arranging for $\frac{1}{8}$ in. clearance between the bolts and sleeves embedded in the units and a tolerance on the slabs of $\frac{1}{16}$ in. The architectural treatment of the house is dependent on the existing range of decorative cement-rendered finishes, and the house is illustrated on this page in various stages of erection. A logical step in the development of this house is to provide a self-finished external slab and so to eliminate the operation of exterior cement rendering and to obtain a wider range of finishes.

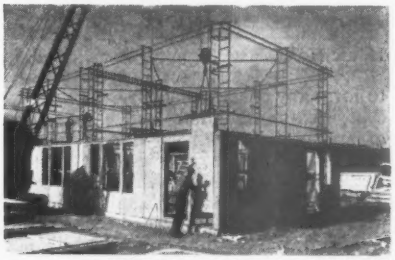
A word is perhaps in place here on the latent possibilities of air-entrained concretes. This class of materials is in its very early stages of development, and we may reasonably expect to find rapid improvements in the direction of improved strength-weight ratios.

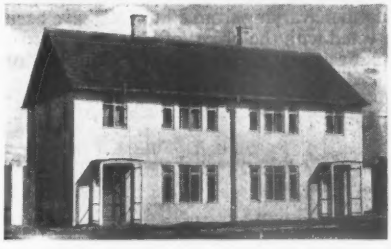
House No. V consists of large precast concrete wall units faced externally with briquettes to simulate the appearance of a brick wall. The units are too large for manhandling, and a special gantry is used to





Above and left: House No. V of precast concrete wall units faced with briquettes. Above L. to R.: placing briquettes in wall panel mould; placing layer of cement mortar before filling with foamed slag concrete; wall units being handled on gantry; Left: the finished house. Below: House No. VI of precast units mechanically handled. A wall panel being placed by crane, note the internal steel jig; a prefabricated roof section being placed; a finished pair of houses





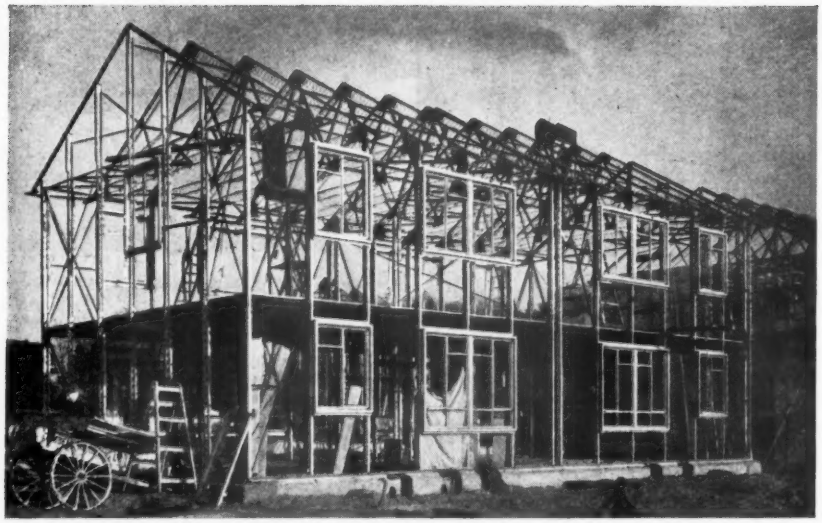
feed the wall slabs along the line of the walls to the mason. They are laid in mortar using normal masonry technique. This system is still on trial, and the development group is not yet complete. Certain difficulties have been experienced and some modifications are likely to be made in design to overcome them. It is too early as yet to pronounce finally on this system. It is illustrated above.

House No. VI represents the logical development in this series of the precast concrete unit of the largest size compatible with convenience of transport. It seems reasonable, where mechanical handling is to be used, to make the units as large as the mechanical equipment can conveniently handle; the results obtained in the development group indicate that speed and cost of erection are not out of scale with the results obtained with the smaller units which are convenient for manhandling. It is of interest to record that the design and production of the large wall units is based on experience gained by the contractor concerned, in the manufacture of the 'Mulberry' components for the Normandy harbour. The house is shown on the right, and it will be noted that the roof structure is made up of large prefabricated sections which are hoisted into place by the same crane which handles the wall units. The external face of the large slabs is finished with an exposed aggregate treatment, but up to the present the finish obtained has not possessed the same æsthetic quality as could be achieved in the manufacture of smaller units. A variety of architectural treatments is being provided in the latest houses built by this system by using cement-rendered finishes with a range of variations in colour. The results are very pleasing, though it does involve an additional process on the site. An interesting technical problem arose in the design of the vertical joints between the wall units to avoid the penetration of rain. Finally, it was decided to provide a drainage channel at the inner face of the joint to conduct any water which might penetrate through the joint to the base of the unit where weep holes were provided. This treatment has withstood successfully the very heavy rains of the autumn of 1946.

The Steel-framed Houses: Of the three steel framed houses now the subject of development groups, only the first is sufficiently near completion to hazard any opinion as to the contribution which this type of structure may make to the housing problem. This is House No. VII, and it is shown on page 364.

The steel-framed house presents a number of difficult problems, but one point in particular must be emphasized. Where a highly prefabricated wall panel is to be provided it is usually necessary to attach a considerable amount of wood to the steel in order to provide fixings for the internal linings and external covering. When wood is in free supply this is not of much consequence, but when wood is scarce it becomes serious. The anomalous position can then arise that there is sufficient wood in a steel-framed house to make a wooden-framed house. When the data from the development groups on all three steel-framed houses is available it will then be possible to make an analysis of all the factors involved. At the present time there is not sufficient information available to do so.

The Wood-framed Houses: Of the two houses of this type, No. XI is the only one for which there is sufficient information



House No. VII, steel framed. The windows in position before wall slabs are fixed

to form any conclusions. This house, however, is extremely interesting. It is made up of large prefabricated wall and floor panels with all the structural framing of timber. The interesting point which this house has demonstrated is the very small amount of wood which is required when the structure is designed by skilful timber mechanics. The quantity of wood in this house is only 1.6 standards (standard=165 cu. ft.) for a house of 900 sq. ft., and this is accounted a very modest figure for a traditional house with brick walls and partitions. Wood is the ideal material for prefabrication, and it is therefore not surprising to find that this house is one of the cheapest in total cost and one of the quickest to erect. The house is shown on page 365.

Results Obtained from Development Groups:

The development groups of houses, in numbers varying from 50 to 150, have been erected with the object of obtaining factual data as to labour requirements and cost of new types of construction in comparison with traditional constructions. As already described, Ministry observers and cost investigators have had access to all the sites and to the contractors' records. Information has been collected, and is now undergoing final analysis at Headquarters.

The work falls into three stages:

(1) A preliminary estimate has been made of the labour requirement in man-hours per house for every operation in the erection of the house.

(2) A record has been taken of the actual man-hours and cost of every operation in the construction of the development group.

(3) A final estimate is being prepared of the man-hours and cost of each type of house under reasonably favourable conditions and assuming uninterrupted large-scale production.

The analysis of the data from which the final estimate will be built up is at present in progress. This is a long and tedious operation; statistical methods are being used to separate the variable factors which have complicated the work on the different sites and to assign to each final figure the true 'confidence limits' which can be attached to it. It is not possible at this moment to give the final estimates, and the results now set out are based on the 'actual' uncorrected data. They are therefore tentative, but even at this stage the indications are interesting.

Let us consider first the broad picture. Traditional houses have been built on existing methods for 400 to 500 years, and there is in Great Britain a background of experience vested in 10 to 12 million houses. The development groups are two years old at most, and the experience in manufacture and construction is to be found in 50 to 150 houses only, built at a time when industrial conditions were chaotic. It is not unreasonable to assume that one of the new types of houses, which has compared reasonably well with the traditional, has at least a fair prospect of success in the future as experience is gained and improvements are made. The intelligent assumption is that the better of the new houses can be improved rapidly, and that the 'actual' values now reported are to be regarded as a pessimistic estimate.

As to the actual figures. Building operations on these houses covered the period 1945–46. The conditions were extremely difficult; supply of materials was sporadic and the 'build-up' of the labour force was erratic. It is fair to state that the process of erection of these new houses went from crisis to crisis. Everybody concerned with the work was frightened when the telephone bell sounded, knowing only too well that one or other of the sites would be in grievous difficulty. The observers on the sites were charged amongst other things with the task of separating the actual productive working time of the labour force from the time consumed in waiting for components which did not arrive when promised, and the time spent in going back to finish a piece of work which for one reason or another could not be completed.

TABLE 2. Man-hours required for all site works in the erection of pairs of houses by traditional and new methods of construction.

Type of house	Estimated man-hours			Actual man-hours as recorded			Adjusted man-hours as recorded for shell, but average of all houses for remainder			Savings in man-hours as compared with traditional
	Shell party wall partitions	Remainder of house	Total	Shell party wall partitions	Remainder of house	Total	Shell party wall partitions	Remainder of house	Total	
							Actual	Average		
Traditional Brick Walls Average of 6 sites.	Not estimated			1,900	3,630	5,530	1,900	3,502	5,402	—
No. I ..	1,375	2,873	4,248	1,215	3,978	5,193	1,215	3,502	4,717	685
No. III ..	778	2,149	2,927	993	3,593	4,586	993	3,502	4,495	907
No. IV ..	1,031	2,334	3,365	1,156	3,536	4,692	1,156	3,502	4,658	744
No. V ..	1,184	2,170	3,354	Data incomplete			1,209	3,502	4,711	691
No. VI ..	1,049	2,587	3,636	1,123	4,082	5,205	1,123	3,502	4,625	777
No. VII ..							1,330	3,502	4,832	570
No. VIII ..	1,794	2,777	4,571	1,603	3,021	4,624	1,603	3,502	5,105	297
No. XI ..	1,221	1,970	3,191	800	2,671	3,471	800	3,502	4,302	1,100

The time properly charged to any operation falls into three main divisions, each of which must be properly accounted for if comparative figures for difficult forms of construction are to have any real meaning. They are the following:

(i) Time occupied in preparation for the operation.

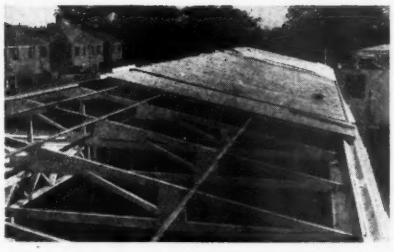
(ii) Time occupied on the actual operation itself.

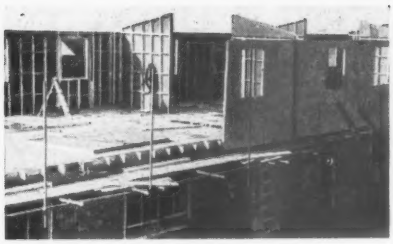
(iii) Time occupied in handling materials and equipment associated with the operation.

In addition there is a varying amount of general time occupied on the site which cannot reasonably be assigned to any particular operation. All these items must be brought into the balance in order to obtain a valid assessment of the value of any particular type of construction. It would be easy, but quite fallacious to compare operations on the basis of item (ii) above alone, but obviously the results obtained would not have any real meaning.

In the houses already described the main element of novelty lies in the shell, party walls and internal partition walls. Consequently in the figures given in the following tables these items have been shown separately, and all the other items have been assigned a constant value which is made up on the basis of an average figure from all the sites. This inevitably introduces certain errors, but is probably the best basis for a first comparison. A word of explanation is necessary as to the actual operations comprised in the 'shell'. These are 'external walls complete with doors and windows, and any plastering or rendering where used, but exclusive of decoration in the form of paint, paper or distemper.'

A word of explanation is necessary regarding the comparative figures quoted here for traditional building construction. They are the averages from six sites each of 50 houses in course of erection in different parts of Great Britain during the same period of time as the new types of houses. Four of the groups are being built by experienced private enterprise builders, where the design and construction of the houses and the whole of the organization has been entirely under the control of the builders. Consequently, the conditions have been the most favourable possible for low values of man-hours and low costs.





House No. XI, wood framed. Top left: light wooden roof trusses with copper sheathing partly fixed. Top right: first floor wall units in position ready for fixing of plasterboard lining. Below: some finished houses

Of the other two sites, one was a group of houses built by a local authority by direct labour, and the other a group built by a public utility body.

The results to date are summarized in Table 2. It shows the comparison between man-hours for certain of the new types of houses as compared with the traditional houses. The costs are not yet sufficiently analysed to quote values. The indications, however, tend to show that the saving in site labour is counterbalanced by the higher cost of the specially prefabricated components.

The figures given in the table are first approximations and should be regarded as merely indicative of the sort of result which can be expected from pilot production.

Many of the firms concerned have profited by the experience gained in pilot production and are certainly working to improved schedules in their present production.

Conclusions:

The main body of experimental work in the new types of houses which have been described lies in the shells, party walls and partitions. These items account for about 32 per cent of the man-hours on site for a traditional house. The percentage savings of labour on shells, party walls and partitions as compared with the traditional house are given in Table 3, also the percentage saving in labour on the whole house, which is obviously very much less.

The savings in labour shown in the foregoing tables are for all labour. Actually the figures for separation of skilled and unskilled categories of labour are not yet complete, but it is true to state that the saving of skilled building site labour is considerably greater in every case than the figures shown above. For example in house No. II where analysis is complete the skilled labour is 33 per cent of the total.

The conclusion is that there are here some good, comfortable and durable houses which can be produced with appreciably less site labour than traditional houses. By applying the principles to all parts of the house which have been applied in the main to the walls alone, it should be possible to effect very appreciable further savings. The cost of the new houses is not yet completely analysed. Some of them are likely to be no more expensive than traditional houses.

(*Concluded*)

TABLE 3. Savings in site labour with new types of houses expressed as a percentage of labour spent in shells, party walls and partitions and as a percentage of all labour in the house.

Type of House	Saving in labour as a percentage of labour in shells, party walls and partitions	Saving in labour as a percentage of labour in the whole house
No. I	36	13
No. III	48	17
No. IV	39	14
No. V	36	13
No. VI	41	14
No. VII	30	10
No. VIII	15*	5*
No. XI	58*	20*

*There are savings in labour in other parts of this house to which these figures do not do full justice

Shell Concrete

by F. S. Snow, M.Inst.C.E., M.I.Struct.E., M.Soc.C.E.(France)

Read at a meeting of the R.I.B.A. Architectural Science Board on 2 April 1947. Mr. Michael Waterhouse, M.C., B.A., Vice-President, in the Chair

THE NAME shell construction indicates very clearly the type of structure it implies, that is, a structure forming a roof of very thin R.C. construction and, like an egg shell, very strong. These shell roofs take advantage of the historic fact that arched shapes can span larger distances than flat shapes. They take advantage of a further fact that by choosing certain arched shapes, suitably restrained, the material may be considered as having zero or negligible bending moment in itself and having uniform tensile or compressive stress across any cross section of the shell, that is, the forces are axial in any cross section.

There are two types of such shells—(*a*) domes or shells curved in more than one direction; (*b*) shells curved in one direction only. These shells may be of cross sections which are segments of circles or ellipses or of any curves for which the assumptions quoted above are valid. Such shells lend themselves to construction in reinforced concrete and many structures incorporating shell roofs have been designed and constructed in England, America, Germany and elsewhere. The author had hoped to give a complete simple example of the calculations necessary for a span of 50 ft., but for reasons stated later found this was impossible within the scope of this lecture, but he has worked out examples (Fig. 1) for a shell curved in one direction only and it will be noted that slab thickness for a 50 ft. span roof may be as small as 2½ in. and theoretically even less. This gives a ratio of thickness to span 1/240, which ratio is conservative compared with 1/600 which has actually been achieved.

History

There are numerous claims as to the inventors of the system but it would appear that the theories of design have been developed over many years by various designers. For instance, the membrane theory of rotation shells was pursued by G. Lame and E. Clapeyron, for loads symmetrical with the axis. Many of the fundamental investigations were published by Messrs. Love, Reissner & Meissner, but it was left to I. Geckeler to give close approximate solutions for symmetrically loaded rotation shells, which could be suitably used in practice. In 1923 Dr. Dischinger, in conjunction with Carl Zeiss, endeavoured to design shells on a rectangular plan; this first proposal was to use double curved shells stiffened by vertical trusses. The difficulties of calculation were so great that the system was abandoned and investigations were concentrated on the single curved shell stiffened at both ends. Dr. Bauersfeld found the differential equations which can be solved mathematically and as a result of his labours, in conjunction with Zeiss, the first shell concrete roof of small span was constructed in the Zeiss Works in Jena in 1924. A larger span shed was constructed in 1925 and in 1926 the first large-scale scheme was effected at Dusseldorf, with spans of 23 metres. Dr. Bauersfeld, in conjunction with the Zeiss Company, developed the netting used in the construction of the Zeiss Planetarium.

In this country the work has been developed—among others—by C. V. Blumfield, and one of the first constructions was that of the Airfield Buildings at Doncaster. It has also been developed by such firms as Concreshell, Chisark and Shell D and Mr. de Steiger, and more recently by Barrel Vault Roof Designs Limited in conjunction with Messrs. Twisteel Reinforcements Limited.

Design and Construction

The calculations tend to be complicated even after simplifying assumptions are made and although good papers in English have appeared in *Concrete and Constructional Engineering*, the complete theory is presented in German in *Handbuch fur Eisenbetonbeau* and other journals, the bibliography being given in the appendix. Tensile, compressive and shear stresses are calculated for each point on the shell and these are converted to principal stresses. The magnitude and direction of these principal stresses being known, reinforcement is provided in these directions to take up the stresses.

Fig. 2 is a drawing showing the plan of the reinforcement and section through the shell of the N.F.S. station at Brownhills. The clear span is 23 ft., whilst the thickness of the shell is 2½ in. Note the typical full-size section through the shell, where the thicknesses are defined by ½-in. cover to the meshes of the reinforcement. Tie beams are provided at the eaves of the shells and end frames are provided at the gable ends. These tie beams are of considerable cross section compared with the thickness of the shell to eliminate excessive deflection and are normally made in hollow box construction. The end frames are accommodated within the curve of the arch, or if a continuous soffit is required, may be treated as upstands externally. The most economical planning grid is when the length of the shell is twice the width—the maximum ratio being five times the width.

Fig. 3 shows the necessity of accurate spacing and placing of the reinforcement; indeed,in this form of construction it is imperative that the bars be fixed to drawing board accuracy. The illustration is that of a plywood factory at Lydney, Gloucestershire, the architects being Messrs. Clifford Tee and Gale [*F*].

Zeiss Network Method of Construction

In the case of Zeiss, two distinct methods of construction have been adopted, the first is applicable to spans up to 120 ft. A fragile mesh or network is incorporated and forms part of the reinforcement, which is left in position. This method consists of erecting a triangular steel mesh weighing about 1.8 lb. per sq. ft. (equivalent to a steel plate of 0.043 in. thick) to the required diameter. On both sides of this network reinforcing bars about ¼-in. are laid wired to the network, which takes the slab stresses, particularly those due to the shrinkage of concrete. Below this steelwork is erected a light

Span	Rise	Length	Max. Loads /ft. Width of Slab		Theoretical Thickness Inches	Practical Inches	Max. Reinforcement each way	Tie Beams Load	Tie Beams Size	Tie Beams Deflection	End Frames Load
			Comp. lb.	Ten. lb.				Tons	Depth × Breadth	Inches	Tons
Circular 50 ft.	25 ft.	50 ft.	3,180	1,980	0.442	say 2½ in.	$\frac{3}{16}$ in. dia. 3 in. c/c.	13.8	36 in. × 12 in.	0.7	17.4
50 ft.	25 ft.	100 ft.	6,500	5,450	0.902	say 3 in.	$\frac{3}{8}$ in. dia. 4 in. c/c.	56	66 in. × 18 in.	4.3	34.8
50 ft.	25 ft.	200 ft.	3,200	11,130	4.45	say 4½ in.	½ in. dia. 3 in. c/c.	223	144 in. × 48 in.	6.0	79.6
Elleptical 50 ft.	12.5 ft.	100 ft.	17,500	9,470	2.43	say 4 in.	½ in. dia. 4 in. c/c.	56	66 in. × 18 in.	4.3	67.6

Fig. 1: Table of calculations for a 50 ft. roof span. Load (*a*) Own weight—12 lb./sq. ft. of arch per inch of thickness. (*b*) Snow Load—10 lb./sq. ft. of plan area—uniform. (*c*) Wind Load —15 lb./sq. ft. basic load or 15 sin. $^2-\phi$ lb. normal to the surface

scaffold (sometimes hung to the network) which in turn carries the light removable formwork to which a high grade concrete (3,000 lbs. per sq. in. at 28 days) is applied, generally sufficient only to cover the reinforcement and protect it from the elements. The concreting is carried out concentrically from the springing to the crown of the shell, so that when it is finished and set the rings of the concrete are self-supporting and the reinforcement has only to carry the weight of the unfinished or unset rings. A very accurately shaped structure allowing the shell to be a minimum thickness throughout is obtained, permitting the use of a very light sub-structure and obviating the use of heavy scaffolding or centring. At spans greater than 120 ft. to 130 ft. other methods are employed which will be described later, but for the method mentioned for greater spans than this there is the natural risk of failure by buckling, having regard to the lightness of the reinforcement.

In the second method of construction, which is applicable to spans of greater size, the network serves purely the purpose of scaffolding and it is, therefore, recovered after use and re-used frequently. The process consists of erecting two concentric networks and connecting them by members so as to transmit the stresses over the inner and outer nets. On this is placed the shuttering covered by the steel reinforcement, the nets and formwork being removed after the concreting is complete, and the nets and formwork re-used. Many other types of formwork have been used, some jacked from the steel scaffolding, or alternatively the concrete floor, and pulled or jacked through the structure after the concrete is set.

Tests

Many interesting load tests have been carried out at various times, such as those at the Hamburg Dock Shed where the deflection did not exceed 1/10,000th of the span (Anton Iedesko *Concrete and Quarrymaker* October 1933) showing conclusively the strength of the shell concrete system of construction. In this connection the author would particularly draw attention to Mr. John Mason's paper *A Report on Structural Engineering in Germany*, which describes the effect of bombing on various shell constructions. In the early days and prior to the construction of the first barrel vault roof at the Carl Zeiss Works at Jena in 1924, Dr. Dischinger caused tests to be carried out on sheet iron and concrete models, later followed with further tests intended to solve the problem of flatter circular segments supported at the rim. An elastic sup-

Fig. 3: Plywood factory at Lydney, Gloucestershire. Architects: Messrs. Clifford Tee and Gale [*F*]

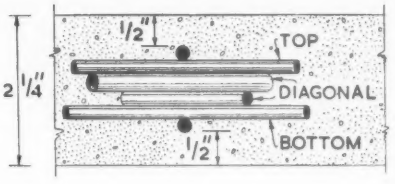
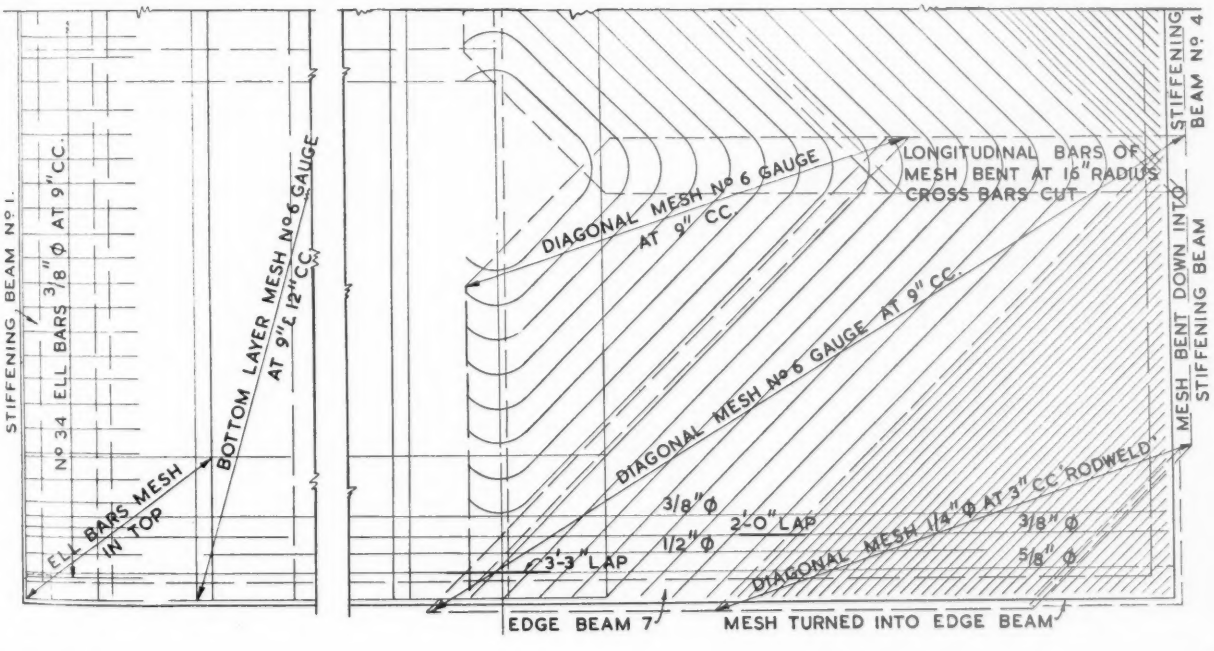


Fig. 2: Plan of reinforcement (below) and (above) enlarged detail showing disposition of top, bottom and diagonal reinforcement bars


STIFFENING BEAM No 1.
No 34 ELL BARS 3/8" Ø AT 9" CC.
BOTTOM LAYER MESH No 6 GAUGE AT 9" & 12" CC.
ELL BARS MESH IN TOP
DIAGONAL MESH No 6 GAUGE AT 9" CC.
LONGITUDINAL BARS OF MESH BENT AT 15" RADIUS CROSS BARS CUT
STIFFENING BEAM No 4
MESH BENT DOWN INTO STIFFENING BEAM
DIAGONAL MESH No 6 GAUGE AT 9" CC.
3/8" Ø
1/2" Ø
2'-0" LAP
3'-3" LAP
DIAGONAL MESH 1/4" Ø AT 3" CC RODWELD
3/8" Ø
5/8" Ø
EDGE BEAM 7
MESH TURNED INTO EDGE BEAM

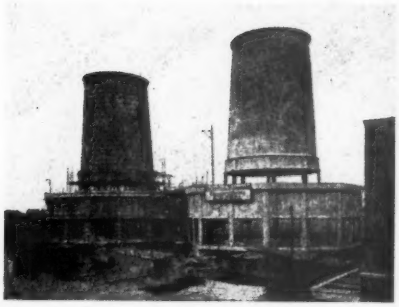


Fig. 4: Cooling towers using Zeiss network

port at the rim was obtained by touching up the sheets at the edge, the load being applied by pumping air into the space between the two circular segments, the open joints being filled with plasticine. The deformations under various load intensities were measured with a precision micrometer, and these gave a clear picture of the working of such segmental vaults.

The author has suggested to Professor Pippard that plastic models might be used to clarify many of the problems relating to shell construction, similar to the work already carried out by him and further described by Miss Letitia Chitty, M.A., in Structural Paper No. 7, of the Institution of Civil Engineers, February 1944, *Modern Experimental Methods in Connection with the Design of Statically Indeterminate Structures.*

Advantages

(*a*) Very light form of construction; (*b*) Light loads carried down to foundations; (*c*) Economy of concrete and steel; (*d*) Ratio of shell thickness to span up to 1/600 already obtained; (*e*) Saving of gutters and economy in down water drainage.

Disadvantages

(*a*) Shuttering problems; (*b*) Normal construction methods not applicable except for lower rings and domes; (*c*) Greater accuracy required in formwork; (*d*) Good labour and supervision essential; (*e*) Point loads on roofs are inadmissible, or severely restricted unless special provision is made; (*f*) Rise of roof may be a disadvantage.

A Selection of Examples and Descriptions of Works already carried out

Probably the most famous example of shell roof construction is the Grand Market Hall at Frankfurt, which is 220 metres long, 50 metres wide and 23 metres high. The roof consists of 15 shells which are elliptical in sections of 14.1 metre spans, with expansion joints at every fifth shell, the length of the cylinder being 36.9 metres. The thickness of the shell at the central cylinders is 7 cm., i.e., 1/527th of the span, and the end cylinders 8 cm., being increased to 10 cm. where the shell joins the rigid end frames and horizontal tie beams. The reinforcement consists of three sets of rods and two sets of distribution rods, following the lines of the principal stresses as closely as possible. The rise of the roof is 6 metres.

Fig. 5: Interior of a warehouse at Alperton, Middlesex

The concreting was done partly by means of a cement gun and partly by normal methods, the latter being adopted as soon as the slope was sufficiently flat.

Another interesting development of the shell concrete construction and utilizing the Zeiss net-work is shown in Fig. 4. The cooling towers have a total height of 19 metres from the springing and the diameter at the top is 11 metres.

As can be seen from the illustration, where the method of construction is clearly shown, this system may very well become a keen competitor of the existing systems, such as the Hyperbolic tower developed by Mr. T. G. Gueritte, Mr. de Steiger and others. The thickness of the shell for the cooling tower varies from 4 cm. to 8 cm.

Another application of shell construction is the salt storage hall, built in Hungary. The width of the hall is 100 ft., height 65 ft. and length 450 ft. The ribs or stiffening arches were spaced at 32 ft. and from this was suspended a thin concrete shell carried between the stiffening arches. The formwork was of bow string arch centring in timber and was jacked or pushed through the whole length on rails. The inside of this hall is entirely smooth and not obstructed by any members.

Fig. 5 is an English example of a warehouse for Messrs. Wiseman, at Alperton, the architect being Mr. E. Drummond Roberts [*L*]. The span is 60 ft. and the width 35 ft. It will be noted that both natural and artificial lighting is provided and the thickness of the shell in this case is 2 in. with a ½-in. internal rendering. The consulting engineer was C. V. Blumfield Consultants Ltd.

Fig. 6 is an illustration of a canteen built for Messrs. May and Baker at Dagenham, the architect being Edward D. Mills [*F*]. The clean lines show how suitable this form of construction is for canteens, whilst Fig. 7 is an interior view showing the excellent lighting arrangements and the very clean and attractive appearance of the whole structure, without any intervening columns. The thickness of the shell is 2¼ in. and the span 48 ft. There are five barrels 25 ft. wide.

Finally we come to an interior of a canteen at Cardiff, designed by Messrs. Clifford Tee & Gale for Messrs. Guest, Keen & Nettlefolds (Fig. 8), the span being 107 ft. by 40 ft. long and the thickness 2½ in. minimum. The clear spaces are greatly to be admired and in this instance roof lights have been provided, between which is a form of strip lighting for use when necessary.

Cost Comparisons

Obviously the cost of a shell type structure depends on a variety of factors, as does the more traditional type of structure. Some of the factors involved are: (*a*) Span of the barrel in each direction; (*b*) rise of the barrel; (*c*) number of barrels in the structure; (*d*) clear height under the barrel; (*e*) type of roof lighting; (*f*) finish. If these points are kept in the forefront of one's mind the following example may be of some use, as a very general guide. For twelve barrels each covering an area of 35 ft. by 60 ft. with 12 ft. clear height for the springing to the floor, the cost was approximately £3 per yd. sup., including insulating board, lining and roofing felt. If the barrel had been 35 ft. by 100 ft. the cost might have been £4 per yd. sup. If the barrels had exceed 35 ft. by 100 ft. the cost curve would have risen sharply.

The overall cost of the conventional type of structure, using light steel roof trusses with asbestos sheet roofing, would be very approximately of the order of 35*s.* to 40*s.* per yd. sup.

If, say, insulated steel deck were used instead of asbestos sheeting, the overall cost would be of the order of 50*s.* per yd. sup.

Insulation

The insulation of these shell roofs may be carried out by normal means, i.e., cork, Tentest or an insulating board on the exterior to the thickness required to meet specific conditions. In this respect the ad-

Fig. 7: Interior of canteen at Dagenham

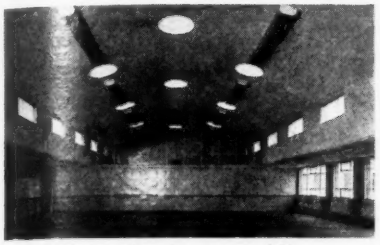


Fig. 8: Interior of canteen at Cardiff

vantages are superior to anything other than insulated steel deck.

Weatherproofing

Under normal construction weatherproofing of this particular type of roof is not considered necessary but in actual fact usually a coat of bitumen or asphalt is applied or, as is more usual, two layers of bituminous roofing felt.

Conclusions

There is no doubt that with the continued shortage of structural steel, asbestos, timber and other structural elements, this type of construction has much to commend itself to present-day needs with a world shortage of materials, requiring as it does very little steel or concrete, although the latter is in ample supply.

The architect, with his æsthetic imagination, can visualize all kinds of uses for this form of construction, and in particular its clean, light-reflecting surface is ideal for food factories or any buildings where cleanliness is essential.

I further make the suggestion that many of our bombed churches could be quickly roofed in from their existing walls and made usable, leaving the more orthodox type of roof to be constructed at a later period, when conditions are more favourable. I would like to give an illustration in order that this suggestion may not seem too impossible. Fig. 9 shows a chapel designed by Mr. J. B. S. Comper [*F*] for the Royal Free Hospital, the shell of which forms both the roof and the interior. To convey the strength of the shell, this particular chapel had an almost direct hit from a flying bomb which destroyed an area of about 4 acres, and whilst the plaster ribs and cornice shown in the photograph were shaken from the structure, the reinforced concrete shell and columns suffered little more than hair cracks in the barrel roof.

Fig. 6: Canteen at Dagenham

Acknowledgements

The author wishes to acknowledge the help he has received from Mr. E. L. Gale, M.C. [*F*], of Messrs. Clifford Tee & Gale; C. F. de Steiger; C. V. Blumfield, B.Sc. (Eng)., A.M.I.C.E.; W. Sefton, B.Sc. (Eng.), A.M.I.C.E., A.M.I.Struct.E.; Messrs. Twisteel Reinforcement Ltd.

Bibliography

In German

1. Bauingenieur—1926, Heft 37 Berlin, by Dischinger.
2. Der Bauingenieur—1926, Heft 48 Berlin, by Dischinger and Finsterwalder.
3. Bauingenieur—1928, Heft 10 Berlin, p. 362, by Dischinger.
4. Der Bauingenieur—1928, Heft 44-46, by Dischinger and Finsterwalder.
5. Bautechnische Mitteilungen—Nov. 1927 Bonn, by Deutschen, Beton Verein.
6. Handbuch Fur Eisenbetonbau—Auflage 12, Band 2, Berlin 1928. Dischinger.
7. Handbuch Fur Eisenbetonbau—Auflage 3, Band 12, Berlin. Dischinger.
8. Bauwelt—1925, Heft 37. Dischinger.
9. Deutsche Bauzeitung—1927, Nr. 23. Ritter and Dischinger.
10. Beton U Eisen—1928, Heft 1 and 2. Kleinlogel.

In English

Feb. 21 1929. Engineering News Record, page 321. Domes and Self-Supporting Arch Barrels, by A. Floris.

April 10 1929. Western Construction News, page 165. Self-Supporting Arch Barrels, by A. Floris.

Sept. 1930. Concrete and Constructional Engineering, London, Eng., page 490, Reinforced Concrete Shell Roofs, by H. Savage.

1930. Transaction, American Society of Civil Engineers, page 1173. Discussion —Domes, by A. Floris.

July 1931. Architectural Forum. Spiderweb Concrete in Europe, by E. V. Stern.

April 19 1932. Engineering News Record, page 537. Thin Concrete Shells for Domes and Barrel-vault-roofs.

April 1932. Construction Methods. Thin Shell Roofs.

October 1933. Reinforced Concrete Shell Roofs, by A. Tedeske. Concrete and Quarry, Canada.

October 1933. Design of Large Pipe Lines, by Herman Schorer. Transactions American Society of Civil Engineers, page 101, also discussion by Skytte. Boardman, Vetter and Schorer.

Fig. 9: Chapel at Royal Free Hospital, London

May 1934. Architectural Forum, International Section, under title 'Central Market Budapest', 3 pages of illustrations published.

June 14 1934. Engineering News Record, page 775, 'Concrete Shell Roof used on World's Fair Building'. Article released by Portland Cement Association.

July 1934. Concrete (Chicago), page 3, 'Reinforced Concrete Shell Roof over Unobstructed Dairy Floor'.

October 1934. The Architectural Record, page 213, Article released by Portland Cement Association 'Concrete Shell Roof used on World's Fair Building'.

August 1935. Concrete and Constructional Engineering, London. Reinforced Concrete Shell Roofing.

May 1945. Concrete and Constructional Engineering, London. Cylindrical Shell Roofs, by W. T. Marshall, B.Sc., Ph.D., A.M.Inst.C.E., M.I.Struct.E.

Sept. 1945. Concrete and Constructional Engineering, London. Elliptical Shell Roofs, by W. T. Marshall, B.Sc., Ph.D., A.M.Inst.C.E., M.I.Struct.E.

June 1946. The Institution of Structural Engineers' Journal. 'A Report on Structural Engineering in Germany', by John Mason, B.A., A.M.Inst.C.E., M.I. Struct.E.

Sept. 1946. Concrete and Constructional Engineering, London. Garage at Withenstowe.

Feb. 1947. Concrete and Constructional Engineering, London. Correspondence.

DISCUSSION

Mr. Walter Andrews said that bearing in mind the sponsors of the lecture and the place in which it had been given, he would not venture to deal with the æsthetics of shell construction. He was sure there were many present who were able and anxious to do so. It would be agreed, he thought, that the examples shown by the lecturer left no doubt about the possibilities of providing pleasing forms in shell construction, both externally and internally, especially the latter. Externally, the shape was a quite common one in the form of Belfast trusses, but there the resemblance ceased.

To the advantages mentioned by the lecturer there should be added the advantage of cleanliness, which should be stressed. There were no ledges for the collection of dust, as there were in the case of trussed roof construction. The most suitable appli-

cation of shell construction was to single-storey structures. For those the most economical construction, in the sense of economy in money, was steel framework covered with a more or less permanent form of roofing. Under normal conditions reinforced concrete trusses or frames were expensive and unsightly. For some purposes, such as offices and canteens, flat roofs were often used, but in the case of larger areas there were problems of drainage, thermal movement and insulation. In his view the shell roof provided a roof of long life which obviated, or at least minimized, the disadvantages which he had just mentioned in connection with the flat reinforced concrete roof, and at the same time much more nearly approached the cost of the usual naked steel framework. It also did a good deal to meet the present-day shortages of materials.

If a steel-framed structure was taken as a basis, for comparable spans there was a saving in steel of about 35 per cent if a reinforced concrete roof was used, and with a shell roof there was a saving of approximately 60 per cent or more. The alternatives to the aggregate and cement required, which were not in such short supply, were slating tiles, timber, asbestos and corrugated iron, all of which were very difficult if not impossible to obtain.

There was, of course, the necessity of formwork, which the lecturer had mentioned among the disadvantages and which for a small building would require a relatively high proportion of materials for temporary use, but, for larger areas and multiple spans and in the hands of experienced people, the re-use of standard forms reduced the problem to much smaller proportions.

The remarks which he had made should not be taken to imply that he considered shell construction the solution for all roofing problems. For many industrial purposes such a roof was quite unsuitable, but for offices, canteens, light assembly processes and the like, shell roofs offered many interesting possibilities.

Mr. E. Leslie Gale [*F*] said that he would like to make a few comments on it as an industrial architect. Some architects were very loth to try out anything fresh, and the relatively new form of construction dealt with in the lecture might sound rather terrifying, but he could say from first-hand experience that the barrel vault roofing or shell roofing, or the concrete waffle, as it was called in his office, had been successfully tried out by his firm on a shadow factory at Lydney in Gloucestershire. He wished to stress the following points: the saving in steel was quite considerable; it was possible to design a factory of 100,000 sq. ft. with only 200 tons of steel—about two-fifths of the amount required for a steel-framed job. He found that that factor carried a great deal of weight with the licensing authorities. In normal times the work was speedy. His firm had built 120,000 sq. ft. of shell roofing in 13 weeks in 1940, which was about the time that it took to get a licence today! With regard to the height of a factory, he did not agree with the lecturer as he found that, since the roof space was clear, it was possible to reduce the height to the springing somewhat below the usual tie beam height of a normal steel truss roof. One of the buildings in the shadow factory to which he had referred was air-conditioned as to temperature and relative humidity, and an insulation coefficient of 0.25 had been secured in that section by the addition of 3 ins. of foam slag concrete on the top of the normal shell roof. Personally he felt that there was a great future for the shell form of construction, particularly as all the normal materials used for roof covering in single-storey structures were in short supply and were likely to remain so for a number of years.

Mr. Ernest Seel [*A*] said that he had had the pleasure of making three small roofs in shell construction; they were war-time constructions and suffered from all the usual difficulties of war-time labour and materials. With regard to the question of expansion, he might mention the case of a building with three barrels, approximately 125 ft. long, each barrel being 25 ft. wide, making a total width of 75 ft., and abutting on that was a fairly normal small portion of a rectangular building, where great trouble was experienced with cracking in the brickwork, for which the only reasonable explanation appeared to be expansion on the main building. He was not sure how much of it was in fact due to the barrel, but he thought that, in the case of the larger barrels and particularly where the roof was covered by only a single layer of bituminous felt, the question of expansion should be seriously considered.

One trouble which might arise in the case of factory canteens, which were often used for informal concerts as well as for their original purpose, was that the shape might be found unsatisfactory from the acoustical point of view. No doubt that difficulty could be overcome by the use of suitable pre-war acoustic materials, but for some time those were likely to be ruled out on the ground of expense.

Mr. F. J. Samuely said there were three points he wished to raise and on which he would like to hear the lecturer's opinion. The first was with regard to the shape of the shell roof. The correct shape was similar to an ellipse, but it was very often found that that was not the most suitable shape and some different ones had been evolved. Personally he had found that it was very much cheaper to introduce a number of planes in cross-section. That was not exact as far as theory was concerned, and it required somewhat more steel and concrete, but it made the shuttering and often the arrangement of glass and lighting very much easier. In a recent case, with a span of about 50 ft., he had found that more money had to be spent on concrete and steel, but that the saving on shutters was considerably larger. He believed that, unless the span was quite considerable, such a procedure might be justifiable. With regard to the problem of cracks occurring due to expansion, he thought that could be solved in every case by the provision of horizontal expansion joints. He had adopted that course in the case of a dome construction on the foreshore at Folkestone, where there was a movement of the expansion joint of $\frac{1}{16}$ in., which was exactly what it should have been according to calculations. The thickness of the dome was 3 ins., and the building withstood the blast of bombs particularly well.

Mr. C. V. Blumfield said shell construction was still in its infancy, and although a number of people had done work of considerable magnitude in that form of construction, in Germany, America and England, its possibilities were only just beginning to be appreciated. He thought there would be very considerable and far-reaching developments of it in the future. One thought of reinforced concrete as specifically a construction requiring columns with very small centres, but, in view of the experience that had been gained in the construction of long span roofs, concrete roofs of very much larger spans than had hitherto been considered possible were now being envisaged, and he hoped that they would be constructed in the brave new world. Most of the development which had taken place had occurred during the last eight or nine years, most of which had been war years, and construction had been very severely limited by the necessities of war. He hoped that, now that factories were being built with rather more attention to æsthetic and living values, a better type of construction would be put up. With regard to shape, it was appreciated, of course, that the circular shape which was generally used was not the best mathematically, but, like so many things in engineering, it was a compromise between what one would like to do and what one had to do. Any shape but the circular shape was rather difficult to evolve in shuttering, and, although it was proposed in the future to construct many other shapes, up to the present the circular shape had proved more satisfactory than any other. Expansion and contraction were, of course, a problem, as they were in all types of roofing, because there was a greater difference of temperature on a roof than generally in a building. Fortunately, the expansion and contraction of concrete were almost exactly the same as the expansion and contraction of steel, so that the movement that one got with a reinforced concrete roof was no more than occurred with a steel roof, and that movement could be taken care of by expansion joints. It was frequently difficult to introduce the expansion joints at sufficiently short intervals, but, roughly speaking, if they were introduced at intervals of about 100 ft. to 150 ft. the movement was not sufficient to be alarming.

Mr. E. A. Day [*A*] said that as he had been resident architect at the shadow factory in Gloucestershire to which his partner, Mr. Gale, had referred, many architects might be interested to learn of the methods he had

adopted to minimize teething troubles and maintain speed during the early stages of construction. After the site had been cleared and levelled, the first operation was to cast the concrete ground slab to provide a clean, clear space, especially during the inclement weather, upon which to operate and store materials, and to give a firm foundation for the scaffolding on which the roof centering would later be supported. Simultaneously the foundations for the walls and reinforced concrete columns were being cast and the brick walls enclosing the various production shops erected. In order to economise as much as possible in shuttering for the external columns, chases were built into the brickwork to the requisite size of the columns, thus providing brick shuttering on three sides for the columns. It was thus a quite easy matter to enclose the fourth side of the column so that when cast this side would be in line with the inside face of the brick wall. Before the concrete was poured into the chases a bituminous felt, about ⅜ in. to ½ in. thick, was nailed to the sides of the brickwork and greased paper was placed in position at the back, the dual object being (*a*) to prevent the mortar from falling into the concrete while the concrete was being poured, and (*b*) to provide room for movement due to shrinkage and temperature changes. While the above operations were being carried out, the internal columns were also being constructed by sliding forms, to reduce formwork to a minimum. Many of the internal column foundations were dug and cast after the ground slab had been laid That achieved speed in the laying of the slab, the portion immediately above the column foundation being left to the dimensions of the base on plan.

The concrete sills and metal windows were placed in position whilst the scaffolding and formwork for the barrel were being erected. By that being done, no time was lost during the construction of the roof shell. It was very important to have a good concrete team under a knowledgeable ganger. The curvature of the roof provided a natural catchment area without special provision having to be made for gutters, and considerable economy in drainage could be effected by gathering all the rain water to one end of the structure. He felt that the shell form of construction had terrific possibilities and a great future, but he would put in a plea to the structural engineers to direct their attention to the simplification of formwork and reinforcement.

Mr. F. S. Snow said he agreed with Mr. Andrews that shell roofs were not suitable for all types of buildings. He could corroborate the saving of steel mentioned by Mr. Gale. As to Mr. Gale's point about the height of a factory, the ordinary height was about 14 ft. between the floors, but in the case of the shell roof construction that height was not necessary; it could be about 9 ft. at the eaves or the springing line. The very good curve that was obtained with shell roof construction gave the sense of spaciousness and height that was required, and storage space was obtained which it was difficult to get between the tie rods of a steel-framed structure. With regard to expansion joints, the problem was the same in the case of steel-framed buildings with concrete slabs. Expansion joints were always a problem and needed careful watching and careful designing. It was not always possible to put straight joints through. He had in many cases put dowel bars in on one end of a slab of shell and left the other end free by putting vegetable grease round it, in order to get a straight joint over that point. The whole problem was one of control. One knew that cracks would occur and one must try to control them so that they would come where they were expected to come and one could deal with them. In shell construction it was still very difficult to know where to put the expansion joints. He thought that the intervals of 150 ft., mentioned by Mr. Blumfield, were too long, and that the intervals should be kept down to 60 ft., but that was not always possible. With regard to the question of the shape of the roof, to which Mr. Samuely had referred, that was a matter of the amount of material used. He had designed movable forms that cost £4,000 or £5,000 to construct, but if they were used over and over again, in the way that he had described, the cost was only about 1¼*d.* per foot, as compared with the price of formwork today of about 1*s.* 3*d.* per foot. It was entirely a question of the number of times the forms were used, and one could have any æsthetic shape that one liked, within reason.

With regard to the economy in drainage to which Mr. Day had referred, he thought that, considering the difficulty of getting a piece of cast iron or steel sheet on gutters, or anything of that sort today, it was just as well to construct a shell roof and save oneself the trouble.

The Regent's Park Terraces

THE recently published report of the Gorell Committee* is prefaced by a Government statement on what it proposes to do with Nash's magnificently conceived but battered and decayed group of terraces round Regent's Park in London. It should first be noted that the R.I.B.A. submitted a report and gave evidence (Mr. Robert Atkinson [*F*], Mr. C. Lovett Gill [*F*], Mr. A. W. Kenyon [*F*], Mr. C. D. Spragg, Secretary, R.I.B.A., forming a deputation) after study of the problem by the R.I.B.A. Town and Country Planning Committee; also that in general, the Gorell Committee agreed with the R.I.B.A. recommendations.

The terraces were built by speculators who had to use façade designs provided by Nash. Many of the blocks were not too well built; the houses were planned for a spacious age when domestic labour was cheap and abundant; damp and dry rot were much in evidence even before bombing caused roofs and walls to leak more than before. In spite of this all parties, including the Government, agreed that the terraces ought to be preserved as a group of great architectural merit and historic interest.

Various projects were considered by the Committee, including complete demolition and the erection of new buildings, demolition and re-use of the sites of some of the less worthy blocks (a course suggested by the R.I.B.A.), conversion to offices for either Governmental or other use, conversion to flats and rehabilitation as houses. At the present time some of the blocks are being reconditioned for temporary use as Government offices.

The Government has decided that generally the buildings shall be rehabilitated and used for residences and not for offices. Exceptions are Someries House, Cambridge Gate and Cambridge Terrace (situated just north of the Marylebone Road on the East side) which the Committee recommended be demolished and their place taken by a new Music Centre or alternatively a hall of residence for students of London University. The policy of using certain of the buildings as government offices is to be a temporary one, and is to be terminated when the supply of normal office premises permits. Other recommendations, approved by the Government, include the preservation of the park and terraces as an entity, any changes being controlled by 'a landscape architect'; no further encroachments by building to be made; the clearance of overgrown shrubs from Park Crescent at the head of Portland Place; removal of unsightly additional storeys added in the past to certain houses; control of height of the new buildings. The Government also recognizes that the carrying out of this policy will involve a capital expenditure of several million pounds, that the money must come in the main from the national finances and that the houses will consequently be subsidized. They agree with the Committee that 'occupation of these magnificent sites should not be the privilege of any particular income group'.

This, then, is an agreed policy, albeit a costly one, for the future of an outstanding example of Regency architecture and one of London's too few amenities. Perhaps its most significant feature is the change of heart in public regard for architecture which has occurred since Nash's Regent Street was swept away some 20 years ago. At that time the numbers of those who protested were few and their voices weak. No serious effort was even made to replace a single design for the whole street with another single design, with the result that is all too apparent. The shops of Regent Street did not produce as much revenue as could new buildings on the same sites and *that* was the clinching argument. Today, how different is the attitude of public opinion and, above all, of the Government!

* Report of the Committee on the Regent's Park Terraces. H.M.S.O. Cmd. 7094. 1*s.*

The 109th Annual General Meeting 5 May 1947

The President in the Chair

Sir Ian MacAlister and Sir Geoffrey Whiskard (Honorary Associates), and two Fellows, eight Associates and eight Licentiates present for the first time since their election, were formally admitted by the President.

The President: I have to present the Report of the Council and Committees for the official year 1946–47 and to move its adoption by this Annual General Meeting.

The Chairmen or other representatives of all the Committees whose reports are appended to the Council's Report have been asked to attend this meeting, so that they may be in a position to answer any questions which may arise in connection with these reports.

I think that I ought to refer to a matter which is not dealt with in the Annual Report, and that is the very generous action of Sir Banister Fletcher, our distinguished Past President, in arranging to bequeath to the library of this Institute his own very fine architectural library. (*Applause.*) I have had the advantage of seeing this magnificent collection of books, and I know what its value will be to the Institute when the times comes, which I am sure you and I hope will be deferred as long as possible. This is the most recent of Sir Banister's splendid gifts to the Institute, and I thought that it was only right and proper to mention it at this Annual General Meeting, although it has been reported in the notes of the Council proceedings and was referred to in the November issue of the JOURNAL.

Mr. A. L. Roberts [*F*], **Hon. Secretary.** I have pleasure in seconding the adoption of the Report. I do not think that it is necessary for me to add anything at this stage.

The President: The meeting is now open for discussion.

Sir Ian MacAlister [*Hon. A*]: It is very nice to be able to say anything that comes into my head, instead of having to sit on the platform and make official announcements. Unlike most members of the R.I.B.A., I have read every word in this Annual Report, and have done so for a great many years in the past. I do wish that more members would take the trouble to find out what is being done for them by the Council and Committees; most members have not the faintest idea of it. This motion for the adoption of the Report ought to be heartily and enthusiastically approved, and not meet with a mere formal expression of approval.

I have been reading the Annual Reports of this body for some 40 years, and I can say quite sincerely that in all that time there has never been a better record of good work, a more imposing record of splendid work, than we have in this document today. It is really beyond praise, and although here and there there may be some small point on which opinions differ, as opinions do, the mass of work which it represents is of enormous credit to the President and Council, to the Boards and Committees, and to everybody who has been responsible in the last twelve months for this work. This, in fact, is the best Annual Report that I ever read, and it gives me very great pleasure to say so in the presence of those responsible for it, being myself in a position of complete irresponsibility as a spectator for the last three years.

Mr. Guy B. Oddie [*A*]: I should like to draw attention to the fact that the Report contains a quite inadequate reference to the Institute's Distinction in Town Planning. The position regarding the Distinction in Town Planning reflects, to my mind, little credit on those whose function it is to interpret policy, to members of the Institute and to the public as a whole. So little information has been provided with regard to this award as to cause serious misgivings as to its value among the younger members; and it is because I think that the strength of this Institute depends upon such misgivings being removed that I have written down the statement which I want to make, and I hope that you will forgive me for reading it out.

When the Distinction in Town Planning was first introduced, a statement was made which said, 'The primary purpose of the Distinction is to satisfy a demand from senior architects to take a qualifying test in town planning suited to their age and attainments.' Now, long before the Distinction was instituted there existed a qualifying test in the final and exempting examinations of the Town Planning Institute. The greater part of the profession has always regarded these examinations as providing the minimum qualifications necessary for a town planner. It has been assumed as a corollary that any person claiming to be a town planner should either have this qualification or else, in the case of the senior practitioner, have sufficient knowledge of his subject and more than sufficient experience of it to enable him to pass the examination without difficulty.

The need, therefore, for any further qualifying test was somewhat obscure, and members of this Institute may perhaps be excused if they fell into the error of thinking that the chief purpose of the Distinction was perhaps rather less distinguished than the name suggests, or of concluding that the age and attainments of senior architects were less meritorious than they are generally supposed to be. But now, without preliminary warning of any kind, we read in the April JOURNAL that the Distinction is not to be a qualifying test at all, but quite the reverse; it is to be awarded by conferment instead of by examination to members who have made some contribution to the field of large-scale planning.

Such a distinction should doubtless be conferred by the R.I.B.A., and some reward should be offered by the R.I.B.A. for a contribution to the field of large-scale planning, as is suggested; but the name of this award is to remain the same, and those on whom it is conferred as an honour are to share the Distinction with those to whom it has been a mere qualifying test. Can anyone be blamed for wondering, therefore, whether the Distinction will reflect much credit on the Institute or for fearing that its conferment may be, in view of its previous history, a doubtful compliment?

Those of us who are interested in maintaining the good name and prestige of the Institute would have been saved much trouble and much embarrassment if more facts had been given in, for instance, the notes from the Council Minutes—more facts about a matter which it could have been anticipated would arouse some controversy. Yet all that is said in the Annual Report is in the last paragraph under the heading 'Town and Country Planning Committee,' where among other subjects dealt with is stated to have been the 'Form of the award of the R.I.B.A. Distinction in Town Planning.' I think that that is a serious shortcoming in an otherwise admirable Report.

The President: Would Mr. Knapp-Fisher deal with that?

Mr. A. B. Knapp-Fisher [*F*]: I should like to emphasize this point, that after very careful consideration it was felt that under the existing examination for the R.I.B.A. Distinction it was not given the position that the Institute wanted to give to such an award. Under this new arrangement, the whole status of this award is raised; it becomes a higher award of greater merit. That was the intention of those who have thought about this question of the Distinction in Town Planning—that it should be a sort of Blue Ribbon given to those members who had proved their worth in the field of town planning. That is what is behind the alteration in the regulation in regard to this Distinction.

Mr. T. E. Scott [*F*]: I have nothing to say on the matter of town planning, but I should like to make one point a little clearer to those who do not always read the notices that are contained in the JOURNAL, and that is in respect of the reference to deferment of military service, which begins at the bottom of the first page of the Report and is continued on the second page. I wish to make this point because during these negotiations we had a good deal of correspondence with members up and down the country who, quite wrongly, gained the impression that our efforts in securing deferment were undertaken only in the interests of full-time students in universities and technical colleges.

This notice does not, perhaps, place the fullest possible emphasis on the fact that a very substantial measure of deferment will be granted to those who are pupils and assistants in architects' offices, so long as they are *bona fide* students of architecture intending to take the Intermediate examination. I do strongly recommend those who are interested, now or in the future, to take the trouble to read the full particulars of the scheme which were published in the March issue of the JOURNAL.

Mr. J. E. K. Harrison [*F*]: I should like to raise two questions relating to the Accounts. One concerns the mortgage of these premises. I notice that on the one hand the mortgage stands at a sum of approximately £77,000, and it appears that the Institute is having to pay interest on that at the rate of approximately 4¼ per cent, while on the other hand the mortgage redemption fund is shown to have investments which are bringing in rather less than 2½ per cent. The present market value of those investments appears to be approximately £58,500. I should like to ask whether it would be possible to reduce the amount of the mortgage, by selling these investments, by that amount of £58,500. By so doing interest charges would be reduced by approximately £2,480, and that, set against the income from the investments, amounting to approximately £1,450, would appear to show an annual saving of rather more than £1,000.

My second question is just a query. I should like to have some details of the item 'Loss on exchange (Australia)' of about £155.

Mr. J. L. Denman [*F*], **Hon. Treasurer**: With regard to the question of the mortgage, it will be appreciated that the advantageous agreement was entered into some years ago, and we, like any private individual, have to meet our obligations under such an agreement. As to the sale of some of our investments, this is a matter which is receiving the very careful consideration of the Committee which is dealing with it, and we are being advised from time to time on such questions. This is one of those items upon which we would certainly take advice when the time is opportune. As to the loss upon the Australian exchange, that is, of course, a matter of currency over which we have no control whatever.

Mr. A. H. Moberly [*F*]: Would Mr. Denman explain more clearly the position with regard to the mortgage? Obviously we have to keep to our agreement, but he did not explain quite what the agreement is. In other words, we have a mortgage of a certain size; what power have we to pay it off by instalments, and to what extent have we to wait until we have the whole of the money before we pay it off? Presumably if we pay the whole of the money we can get rid of the mortgage?

Mr. Denman: We can review it next year, and that would be an opportune time to consider the other matter raised by the first speaker.

Mr. Colin Penn [*A*]: Under the heading 'The Architectural Science Board' there is a section on the Standard Specifications Committee. I should like to take this opportunity of asking whether the Committee could not do something about the extremely uneven quality of the standard specifications which are put out by the British Standards Institution. Some of them, in my opinion, are very good indeed, but quite a large number are virtually useless and are very expensive; one is sometimes asked to pay 2*s*. for a couple of pages of index and half a dozen pages of truisms, and they are not even of use to a student. If this enormous field is being covered, and in many cases covered very well, some sort of co-ordination of the kind that this Committee could give should be exercised to see that the quality of the whole is equal to the quality of some of the parts.

Mr. M. Hartland Thomas [*F*]: Those comments are duly noted. We agree very much with Mr. Penn's attitude, and all that I can really add is 'Come in and help us.' We shall be very glad to have your assistance in this work.

Mr. A. H. Barnes [*F*]: I should like to add that the representation of this Institute on one of those Committees is only a very small proportion of the whole Committee. I quite agree that some of the standards are not so good as others. I should like to see some of them improved, and I have made some suggestions myself; but I cannot force my opinions on other people, and I can quite appreciate the fact that someone might think that something was bad which I, on the contrary, thought was good; we can not get everybody to agree. The standards are the best that can be done at a round table conference looking at the question before the Committee from all points of view—scientific, practical, commercial, and so on. With regard to the price, that is a matter for the B.S.I., and we have no say whatever in that.

Mr. Colin Penn: Perhaps I should have made it clear, in order to avoid confusion, that I am really referring to the codes of practice, not so much to the specifications themselves.

Mr. Hartland Thomas: We do not deal with the codes of practice.

Mr. Charles Woodward [*A*]: I do not understand the point if it refers to the codes of practice, because as far as I know no code of practice prepared by the R.I.B.A. has at present been issued which consists merely of a lot of items for which you pay 2*s*. Perhaps Mr. Penn will elaborate what he means with regard to codes of practice.

Mr. Colin Penn: I am afraid they go out of my head as easily as they do out of other people's. I had better take this up afterwards.

Mr. D. H. McMorran [*F*]: In supporting the motion before the meeting, I should like to raise one or two points on the Accounts. I see that we are given only the net cost of the JOURNAL and Kalendar. I seem to remember that in past years it has been the practice to give the profit and loss on the JOURNAL, and in any case it seems to me that it would be a very interesting thing to have, particularly having regard to the new form of the JOURNAL. I wonder whether the Council have had any expressions of opinion from members on the new form of the JOURNAL? The JOURNAL seems to me to be designed at the moment to carry some sort of bookstall appeal, and I wonder how far that is justified and how far it is reflected in the cost of production.

Mr. J. L. Denman [*F*]: The JOURNAL is largely self-supporting, with the aid of the advertisement section, and the Kalendar was not published last year in its pre-war form.

The President: Would Mr. Bird like to say something about the JOURNAL?

Mr. Eric L. Bird [*A*]: The JOURNAL is at present going to 13,012 Fellows, Associates, Licentiates and Students, all of whom have individual, tenaciously-held and dogmatic opinions on questions of design, including the appearance of the JOURNAL! Having said that, I think I should admit that I have made some experiments, and, as I warned the Executive Committee when I started, I knew perfectly well that some of those experiments might not come off. I have always taken note of failures, as well as of

some successes. Generally, however, I have received a very great bulk of approval from members, with occasional detailed criticisms.

The question of 'bookstall appeal'—a very nice phrase—was to some extent a deliberate decision. The JOURNAL Committee, under the chairmanship of Sir Percy Thomas, was very much impressed by the fact that many offices had piles of unopened JOURNALS, and it was felt the JOURNAL was good, and could be improved, and that it should be brought to the notice of those members who did not bother to open it. So we quite deliberately put a picture on the cover—because architects will always look at pictures of architecture—and changed the colour from issue to issue, so that they would know that there had been a change of issue. When we have succeeded in our objective of making all members open and read their JOURNAL, which they appear to do now very much more than they did in the past, we propose to change the cover again to something which will be more suitable, probably, at that time.

I may also say that I am proposing to set up, when we have got over the troubles of new printing contracts, power cuts and so on, a scheme of reader research by getting a statistical cross-section of the membership to give me their opinions on selected issues of the JOURNAL, in very much the way that the B.B.C. does listener research. We shall then not have merely those members who bother to write and complain, or who are kind enough to write and approve, as an indication of opinion, but an accurate report on the views of the membership generally not only on the JOURNAL in general terms but on all sorts of features, including the cover, the advertising pages and everything else.

Mr. McMorran: Mr. Denman did not quite answer my point about the publication of the profit and loss on the JOURNAL. Would it be possible to include that in future annual accounts or not?

Mr. Denman: We will consider that point and go into the matter. It shall receive full consideration.

Mr. McMorran: The other points which struck me were the expenditure of the Architectural Science Board and the expenditure of the Public Relations Committee, of £646 odd and £1,976 odd respectively. Under the same section of the Accounts there is an item of £1,000 for the publication of a national plan. If I could be told what that item represents I should be glad; and I should like to have a brief account from those two Committees of how that money was spent. It does not appear in their reports.

Mr. Denman: The Architectural Science Board and the Public Relations Committee are very active agencies in the Institute at the present time, and obviously that must create certain expenses, which are accounted for in the Accounts, for and against. With regard to the national plan, I may say that where sums are not fully expended they are brought down into the Balance Sheet and accounted for under 'Sundry Creditors.' I do not pretend to be an accountant, but we have our official accountant here this evening, and if there are any details which any member wishes to bring up we shall be very glad to let him have the information that he wants.

As to the national plan, that has not yet been published, but we have allowed a sum, as has been said, of £1,000 for that publication, and the question is now under review as to whether or not it shall be published. If it is not, there will be a credit in next year's accounts.

Mr. McMorran: Thank you, if the members feel that that is a satisfactory reply.

Mr. A. L. Roberts [*F*], Hon. Secretary: Since the Council have already committed themselves to the publication of that plan, we are bound to make provision for that expenditure.

The President: Are there any other questions from any member? If there are no other questions, I will ask you to vote on the resolution, as follows: 'That the Report of the Council and Committees for the official year 1946–47 be approved and adopted.' Is that agreed? (*Agreed.*)

The list of attendances at the meetings of the Council has been laid on the table and will be printed in the next issue of the JOURNAL, and also sent out to members with the voting papers.

I beg to move that a hearty vote of thanks be accorded to Mr. E. B. Glanfield [*F*] and Mr. John Summerson [*A*] for their services as Hon. Auditors for the past year. (*The vote of thanks was carried by acclamation.*)

The President: Mr. Cecil Burns [*F*] and Mr. John Summerson [*A*] are both eligible and willing to be nominated as Hon. Auditors for the coming year, and if it is your pleasure I beg to move that they be so nominated. (*Agreed.*)

The Secretary announced forthcoming meetings.

The President: That concludes the business of the meeting. I am very glad to see so many here, and I thank those who have taken part in the discussion and raised points which I am sure are of interest to all of us.

Nominations for the 1947 Council

In accordance with a decision of the Council candidates nominated for election have been asked to give the following brief particulars for the information of members:—
(A) Address; (B) Date of birth; (C) Degrees, affixes, prizes, publications and distinctions; (D) Type of experience, e.g. official or private practice; (E) Type of practice, e.g. churches, schools, housing, industrial, etc.; (F) Previous service on R.I.B.A. Council and Committees, the Architectural Association or an Allied Society; (G) Military or any other form of national service.
The following candidates have been nominated:

AS MEMBERS OF COUNCIL

Abbott: Albert Leigh. Nominated by P. W. Adams, W. Beswick, T. S. Darbyshire, A. E. Henson, H. G. Stanham, F. A. Vernon, *Fellows*; G. R. Shires, E. Berry Webber, *Associates*. (A) 5 Buckingham Place, Westminster, London, S.W.1; (B) 17 October 1890; (C) F.R.I.B.A., M.C., T.D., Society of Architects Architectural Scholarship 1912, Silver Medal 1913, Travelling Scholarship 1913; (D) Private Practice; (E) Housing, Laboratories and Industrial; (F) Demobilization Committee, R.I.B.A.; (G) October 1914 to June 1919, Royal Engineers, France; 1933-39 C.R.E. (56th London Division) and Belgium; 1939-43 Deputy Chief Engineer Eastern Command (Colonel).

Armstrong: Edward William. Nominated by the Council under Bye-law 34. (A) 19 Manchester Square, London, W.1; (B) 28 July 1896; (C) F.R.I.B.A., Henry Jarvis (Rome) Studentship 1921, A.A. Dip.; (D) Private Practice; (E) Housing and General Practice; (F) R.I.B.A. Town and Country Planning Committee (Vice-Chairman), R.I.B.A. Housing Committee, Member of A.A. Council 1944-46, Pre-War Member of Board of Architectural Education and A.R.C.U.K., (G) 2½ years 1914-18 War, 4½ years 1939-45 War.

Aslin: Charles Herbert. Nominated by the Council under Bye-law 34. (A) County Hall, Hertford; (B) 15 December 1893; (C) F.R.I.B.A., M.I.Struct.E; (D) Official since 1919, alternating between County Borough Council and County Council; (E) Every type of Municipal Building: Education, Housing, Police, Hospitals, etc., Municipal Offices, Markets, Town Planning; (F) Member of Official Architects' Committee since inception, Chairman of Official Architects' Committee last two years with seat on Council, President of Notts., Derby and Lincoln Architectural Society 1941-43, Former member of A.R.C.U.K.; (G) H.M. Forces September 1914 to February 1919.

Bain: Victor. Nominated by the Council under Bye-law 34. (A) 3 Queen Square, Leeds 2; (B) 13 June 1887; (C) F.R.I.B.A.; (D) Private Practice; (E) General: Banks, Schools, Various Industrial Works, Garages, Offices, Swimming Baths; (F) R.I.B.A. Council 1935-37, 1939-47; Allied Societies Conference 1934-36; Science Committee 1935-40, Chairman 1939-40; Town Planning Committee 1935-38; Practice Committee 1944-47; West Yorkshire Society, Member of Council 1922-47, President 1934-36; (G) 1914-17 Northern France: U.P.S. Brigade, Royal Fusiliers, Durham Light Infantry; invalided out of Service 1917.

Barnes: Alfred Henry. Nominated by Hubert M. Fairweather, Stanley Heaps, Cecil Kennard, Alister MacDonald, John Swarbrick,

Edwin Williams, G. Grey Wornum, *Fellows*. (A) 14 Sydenham Road, Croydon; (B) 27 January 1874; (C) F.R.I.B.A., M.I.Struct.E.; Sundry Articles and Serials on New Materials and Methods of Construction, Building Bye-laws, Fire-resistance, Calculations for Timber Structures, etc.; (D) Some years of Official experience on the Professional Staff of the London County Council, otherwise in Private Practice; (E) *In Official Practice:* Drafting Building Bye-laws, Investigating all New Materials and Methods of Construction for the L.C.C., Representing the Council on British Standard Committees and other Committees and Conferences, also engaged in Housing and Schools Work; *In Private Practice:* Mainly Housing; (F) Previously on Science Committee (Hon. Sec. and Vice-Chairman). At present, member of the Architectural Science Board, Chairman of the A.S.B. Standards Committee, Vice-Chairman of the Co-ordinating Committee; representing R.I.B.A. on the Parliamentary and Scientific Committee, and also on the General Council, the Building Divisional Council and many of the Technical Committees of the British Standards Institution; (G) During the 1914–18 war in the R.N.V.R. (Anti-Aircraft Corps); during the last war engaged on work for the Ministry of Home Security and also as consultant to the Ministry of Works.

Bartlett: Percy James. Nominated by the Council under Bye-law 34. (A) Bolsover House, 19 Herbert Road, Sherwood Rise, Nottingham; (B) 3 March 1884. (C) F.R.I.B.A. (D) Private Practice and Company Architect; (E) Specializing in Industrial and Store Buildings, also Buildings for Scientific and Agricultural Research and Rural Housing; (F) Member of Council 1939-47 and Science Committee R.I.B.A. (G) R.N.V.R. 1915-18, N. Midland E.S.O. Reconstruction Panel 1940-45, etc.

Beaumont: John Somerville. Nominated by C. Gustave Agate, F. Leslie Halliday, Francis Jones, H. T. Seward, Isaac Taylor, J. Hubert Worthington, W. Cecil Young, *Fellows*. (A) 53 Spring Gardens, Manchester; (B) 8 May 1890; (C) M.C., B.A. (Manchester), F.R.I.B.A.; (D) Private Practice, and 17 years Disley Rural District Council; 1943-45 Cheshire County Council. (E) Schools, University Buildings, Retail Stores, Houses, Industrial Buildings; (F) Two years R.I.B.A. Council ending June 1947; about 20 years on Council of the Manchester Society of Architects; President, Manchester Society of Architects 1945-47; (G) 1914-18 Infantry (18th Batt. Manchester Regt.) and G.S.Os. 14th Division; 1940-44 Colonel commanding Sector 33 Home Guard.

Bunch: Arthur Charles. Nominated by the Council under Bye-law 34. (A) 23 Binswood Avenue, Leamington Spa; (B) 10 March 1879; (C) F.R.I.B.A.; (D) Official and Private; County Architect of Warwickshire until 1945; (E) Schools, Hospitals, Housing and General Practice; (F) R.I.B.A. Council 1938–47; Vice-President 1940–43; Executive; Finance; Professional Conduct; Registration Committees; A.R.C.U.K. and Committees; Council, Birmingham and Five Counties Architectural Association; Council of Coventry Society of Architects; (G) County of Warwick: Member of County A.R.P. Headquarters' Staff.

Culpin: Clifford Ewart. Nominated by G. M. Boon, D. Booth, Hubert L. Meed, W. W. Ryder, U. A. Sherwin, R. W. Stoddart, *Associates*; Hubert F. Bateman, *Licentiate*. (A) 3 Southampton Place, London, W.C.1. (B) 15 July 1904; (C) F.R.I.B.A.; (D) Private Practice; (E) Municipal Buildings and Housing Schemes; (F) Nil; (G) Major, Royal Engineers; served as G.E. in England and India and as Staff Officer, Designs, H.Q., A.L.F.S.E.A.

Deacon: Major Basil Charlton. Nominated by F. H. Allen, Paul J. J. Panter, W. Reginald Steel, *Fellows*; E. J. Storry, *Associate*; P. G. Copson, C. Croft, H. A. Harris, *Licentiates*. (A) 9 St. Paul's Square, Bedford; (B) 26 April 1878; (C) F.R.I.B.A.; (D) 2 years Official, 40 years Private Practice; (E) Churches, Schools, Housing, Theatres, Cinemas, Industrial, Domestic; (F) Two periods as President of Northants., Beds. and Hunts. Association of Architects on Allied Societies' Conference; one period as Chairman of Bedford Branch on Allied Societies' Conference; (G) First World War as Capt. R.E.; 16 years Commanding Territorial Coy. R.E. with substantive rank of Major; 2nd World War 4½ years Major R.E.; 2nd in Command 1st M.T. Training Depot R.E. and D.C.R.E.

Fairweather: George. Nominated by Gordon Stephenson, *Fellow*; T. W. Atkinson, Anthony Cox, Mrs. Susan Cox, David Crompton, Anthony Pott, Peter Shepheard, *Associates*. (A) 28 Wigmore Street, London, W.1; (B) 14 July 1906; (C) F.R.I.B.A.; 1st Prize R.I.B.A. Industrial Housing Competition; Author of several Articles on Technical Subjects; (D) Private Practice; (E) Schools, Housing, Shops and Offices; (F) Codes of Practice Committee—Roof Coverings; B.S.I. Co-ordinating Committee; Council of Essex, Cambridge and Hertfordshire Society; (G) —.

Fry: Edwin Maxwell. Nominated by the Council under Bye-law 34. (A) 63 Gloucester Place, London, W.1; (B) 2 August 1899; (C) F.R.I.B.A., B.Arch (Liverpool); Publications: Fine Building (Faber), Architecture for Children, with Jane Drew (Allen Unwin); (D) Private Practice, Colonial Office Adviser; (E) Schools, Flats, Housing, Industrial Town Planning at Home and Abroad; (F) Associate Member R.I.B.A. Council, Member A.A. Council; (G) Infantry Officer 1917-20, Royal Engineers 1939-43 (Major).

Geens: Antoine Englebert. Nominated by the Council under Bye-law 34. (A) Regent Chambers, 15 Westover Road, Bournemouth; (B) 5 March 1898; (C) F.R.I.B.A., Romford Town Hall, and Newcastle-on-Tyne Civic Centre (Competitions won); (D) Private Practice; (E) Factories, Housing, Church Work, Hotels, Commercial Buildings, Town Halls; (F) Represented Hants. and I.O.W. Architectural Association on R.I.B.A. Council 1939-47, Past President of Hants. and I.O.W. Architectural Association; (G) Military Service 1915-18.

Howes: James Frederick. Nominated by W. J. Gomm, *Fellow*; Paul E. Cornu, K. Standish King, C. R. Millington, Eric Rugg, J. W. Wood, *Associates*; Edward C. Butler, *Licentiate*. (A) 1 Verulam Buildings, Gray's Inn, London, W.C.1; (B) 16 July 1903; (C) F.R.I.B.A., A.M.T.P.I., R.I.B.A. Essay Medallist 1929 (Essay published in R.I.B.A. JOURNAL); Distinction in Thesis, 1st Premium Flat Competition for Stoke Newington Borough Council (1933), 2nd Premium Town Hall Competition for Stoke Newington Borough Council (1934), 3rd Premium Flat Competition Emily Street Area for City of Birmingham (1936); (D) Private Practice in partnership with F. L. Jackman [*F*] since 1933; (E) Housing for Local Authorities, Cinemas and Factories; (F) Examiner R.I.B.A. Final (Subject C); (G) —.

Howitt: Leonard Cecil. Nominated by Hubert Bennett, Duncan A. Campbell, G. Noel Hill, *Fellows*; C. T. Bloodworth, W. S. Hartley, J. H. Ll. Owen, *Associates*; A. MacKenzie, *Licentiate*. (A) City Architect, Town Hall, Manchester, 2; (B) 23 November 1896; (C) B. Arch. (Liverpool); Diploma in Town and Country Planning (Manchester); Diploma in Public Administration (Liverpool); F.R.I.B.A., A.M.T.P.I.; (D) Official Architecture 17 years; Private Practice 11 years; (E) *Official*: All types of Local Government Buildings, Schools and Housing, Administration of Bye-laws, Town Planning; *Private*: Banks, Commercial Buildings, Industrial Buildings, etc.; (F) Fellow of Manchester Society of Architects and Member of Council; Fellow of Liverpool Architectural Society and ex-Member of its Council and various Committees; (G) Army 1915–20 Captain and Adjutant; Army 1942-45, Major, War Office Staff.

James: Charles Holloway. Nominated by A. F. B. Anderson, Anthony M. Chitty, Graham R. Dawbarn, C. Lovett Gill, R. Furneaux Jordan, Arthur W. Kenyon, *Fellows*; T. D. Goddard, *Associate*. (A) 5 Bloomsbury Street, London, W.C.1; (B) 22 January 1893; (C) R.A., F.R.I.B.A.; (D) Private Practice; (E) Housing, Municipal and County Work; Architect and Liveryman of Goldsmiths' Company; (F) 1933-34 Chairman, Art Committee; (G) 1914-16; Camouflage 1941-43.

Kemp: Cecil George. Nominated by the Council under Bye-law 34. (A) Sewell's Orchard, Tewin, Hertfordshire; (B) 29 January 1897; (C) F.R.I.B.A.; (D) Private Practice 1913-28; Official Architect 1928 to date; (E) Housing, Private Houses, Flats, Commercial and Industrial Buildings, Pithead Baths, Social Welfare Buildings and Grounds; (F) Member of the R.I.B.A. Post-War Reconstruction Committee and of the Housing and Planning and Amenities Committees; Hon. Secretary of the R.I.B.A. Official Architects' Committee June 1945 to date; Member of the Architectural Association, Member of the Essex, Herts. and Cambs. Society of Architects, Fellow of the Institute of Landscape Architects; (G) Essex Regiment from 1914 to 1919: B.E.F. France 1916 to 1919.

Lynch: Thomas Joseph. Nominated by Walter Goodesmith, Bevil Greenfield, A. Medlycott, J. A. C. Platts, Alan Reed, L. G. Skelton, G. Watt, *Associates*. (A) 62 Grennell Road, Sutton, Surrey; (B) 13 May 1902; (C) F.R.I.B.A., P.A.S.I.; (D) Private; also Technical Education; (E) Professional experience (over a period of 20 years) of a General Nature: Domestic, Churches, Schools, Hotels, etc.; (F) Member of R.I.B.A. Examinations Committee; Examiner in Construction, Inter. 1947; (G) Civil Defence.

Nunn: John Price. Nominated by Professor R. A. Cordingley, F. L. Halliday, *Fellows*; A. L. Arschavir, A. J. Gray, T. Howarth, C. W. Quysner, R. B. Turner, *Associates*. (A) 180 Oxford Road, Manchester, 13; (B) 5 May 1897; (C) B.A. (1st Class Hons. Arch.), F.R.I.B.A.; Diploma, Town Planning (with Distinction), A.M.T.P.I.; A.I. Struct.E; Ex-Service Men's Jarvis Travel Scholarship; (D) Assistant in the Offices of Mr. Francis Jones, Sir Percy Worthington, Sir Edwin Lutyens, Messrs. Bradshaw Gass and Hope; Lecturer in charge of 5th year Liverpool School of Architecture for five years; Lecturer in Architecture and Master of Design at Manchester University for 13 years; Private Practice from 1928 onwards,

and from 1945 in Partnership with Mr. C. W. Quysner, A.R.I.B.A. (E) Farms, Industrial, Housing and Commercial Work; Hon. Architect, Community Council of Lancashire; (F) Previous service on R.I.B.A. Council, etc.; Member of Council of M.S.A. 11 years, 7 years as Hon. Secretary, M.S.A.; Member of R.I.B.A. Institute Affairs Sub-Committee 1945; (G) Served with Royal Field Artillery 1915-19; Awarded Silver Medal 4th Army Educational Course.

Scott: Thomas Edward. Nominated by the Council under Bye-law 34. (A) 2 Verulam Buildings, Gray's Inn, London, W.C.1; (B) 28 March 1895; (C) F.R.I.B.A., R.I.B.A. Athens Bursary, Certificate of Hon. Mention Soane Medallion; Publications on Technical College Buildings, Education and A.R.P.; (D) (a) Private Practice; (b) Head of Department of Architecture, Northern Polytechnic; (E) Technical College and General; (F) Member of Council 1935–36; Chairman, Demobilization Committee; Chairman, Science Committee; Vice-chairman, Board of Architectural Education, and Member of Schools' Prizes and Examinations Committees; Intermediate and Final Examiner; Chairman, War Emergency Panel; Chairman, Examinations Concessions Committee; Salaried Members' Committee; Chairman, A.R.P. Committee; (G) 1915–19 Australian Field Artillery; 1941–44 Home Guard; Chairman of various Home Office Committees on A.R.P.; Chairman of Architecture and Public Utilities Advisory Committee to M. o. L.

Steele: Frank Reginald. Nominated by K. E. Black, John L. Denman, F. F. Howard, Stavers H. Tiltman, *Fellows*; H. Mackley, B. Peters, H. W. M. Sage, William J. Thrasher, *Associates*; S. M. Ralph, *Licentiate*. (A) County Architect, County Hall, Chichester, Sussex; (B) 6 July 1905; (C) F.R.I.B.A., F.S.I., M.T.P.I., R.I.B.A. Dist. T.P., A.M.I.Struct.E.; (D) 17 years Official experience in Wolverhampton, Huddersfield, Bristol and Exeter; recently City Architect of Exeter; present position County Architect of West Sussex; (E) Schools, Housing, Health and Public Buildings; (F) Member of Council of South Eastern Society of Architects; previously Member of Council of Devon and Cornwall Architectural Society; Member of County Architects' Society; (G) Civil Defence.

Stephenson: Gordon. Nominated by the Council under Bye-law 34. (A) 166 Kew Road, Richmond, Surrey; (B) 6 June 1908; (C) F.R.I.B.A., B.Arch. (Hons.) (Liverpool), Master in City Planning (Mass.Inst.Tech., U.S.A.), A.M.T.P.I., etc.; (D) Official and Private Practice; (E) Ministry of Town and Country Planning; (F) Member of several R.I.B.A. Committees, Member of Council A.A.; (G) Divisional Architect Royal Ordnance Factory and Hostels for War Workers; temporary service with Ministry of Town and Country Planning.

Stillman: Cecil George. Nominated by the Council under Bye-law 34. (A) County Architect, Middlesex House, 20 Vauxhall Bridge Road, London, S.W.1; (B) 6 April 1894; (C) F.R.I.B.A., M.M., Vice-President R.I.B.A.; numerous Articles and Papers on School Architecture and on Public Work generally; (D) County Architect, Middlesex County Council; previously County Architect, West Sussex and East Suffolk; Deputy County Architect, Cheshire and Hampshire; President, County Architects' Society; Member various Government Committees; (E) Official Work; (F) Member R.I.B.A. Council and R.I.B.A. Executive Committee since 1939, also served on Reconstruction Committee, Registration Council, Housing Committee and Architectural Science Board; Vice-Chairman of Architectural Science Board; Chairman of School Design and Construction Committee; Vice-Chairman of Official Architects' Committee, Vice-President 1946–47; (G) Served in Royal Engineers 1914–18, awarded M.M. and Mentioned in Despatches; Home Guard 1940.

Swarbrick: John. Nominated by the Council under Bye-law 34. (A) 3 North, King's Bench Walk, Temple, London, E.C.4; (B) 22 May 1879; (C) F.R.I.B.A., F.S.A., M.Inst. Struct.E., A.A. Silver Medallist 1903, R.A. Silver Medallist 1904; Publications on Robert Adam, Easements of Light, etc.; Editor 'National Ancient Monuments Review'; (D) Official and Private; (E) Churches, Schools, Domestic and Business Premises; (F) R.I.B.A. Council 1939 to date, R.I.B.A. Architectural Science Board, Practice Committee, Joint Committee on Law of Ancient Lights, School Design Committee., Profl. Text and Reference Books Committee, Hon. Secretary of the Manchester Society of Architects for 11 years; (G) Emergency Works Officer (M.o.W.) for Cumberland, Westmorland, North and Centarl Lancs; Chief Technical Officer, Board of Trade (N. Region); Codes of Practice Officer, Dept. of S. and I. Research.

Thomas: Mark Hartland. Nominated by the Council under Bye-law 34. (A) 46 Sheffield Terrace, London, W.8; (B) 8 October 1905; (C) M.A. (Cantab.); F.R.I.B.A.; 'Building is Your Business' (Wingate), May 1947; (D-E) Before 1940, partnership in Private Practice, Bristol; since 1940, Deputy Chief Architect to a very large Industrial and Commercial Company, London; (F) 1942 Reconstruction Committee, 1945 Foreign Relations Committee, 1946-7 Competitions Committee; Chairman, Architectural Science Board; (G) —.

Waterhouse: Michael Theodore. Nominated by the Council under Bye-law 34. (A) Staple Inn Buildings, High Holborn, W.C.1; (B) 31 August 1888; (C) M.C., B.A. (Oxon), F.R.I.B.A., Vice-President R.I.B.A.; (D) Private Practice 1920–25 with Paul Waterhouse, 1925 to date with C. G. Ripley; (E) General: Domestic, Banks, Insurance Companies, Hospitals, Laboratories, Industrial, Commercial; (F) Council A.A. 1921–24; R.I.B.A. Practice Committee 1930–33, 1937–47; Joint Hon. Secretary to Practice Committee 1939–44, R.I.B.A. Council 1921–22, 1923–29, 1930–33, 1940–47; Hon. Secretary R.I.B.A. 1940–46, Vice-President R.I.B.A. 1946–47; R.I.B.A. Representative on M. o. W. National Consultative Council; (G) 1914–20 1/1 Notts. Sherwood Rangers Yeomanry: Egypt, Gallipoli, Macedonia, Palestine, Syria; 1940–45 Home Guard.

AS ASSOCIATE MEMBERS OF COUNCIL

Allen: Professor Joseph Stanley. Nominated by the Council under Bye-law 34. (A) Department of Town and Country Planning, King's College, Newcastle-upon-Tyne; (B) 15 March 1898; (C) B. Arch. (Liverpool), M.T.P.I., A.R.I.B.A., R.I.B.A. Distinction in Town Planning, Athens Bursar 1937; Publications: 'A Plan for the West Cumberland Development Area' (in collaboration with R. H. Mattocks) 1946, 'A Plan for Accrington' (in preparation); contributions to Architectural and Town Planning Periodicals; (D) Teaching and Private Practice; (E) Town Planning, Churches (consultant to the Dean of York), Housing (designed prototype 'Airey' prefabricated house), University; (F) Council R.I.B.A. 1944–47; Chairman, School Committee, 1945–46; Vice-Chairman, Board of Architectural Education, 1943–46; Member, Art Committee; Examiner in History of Architecture, 1933–46; Member, Committee on the Architect and Town Planning; Member, Central Committee on the R.I.B.A. National Plan; Member, Committee on Textbooks; Liverpool Architectural Society, Hon. Secretary, 1929–33, Member of Council; West Yorkshire Society of Architects, Member of Council 1933–45, Vice-President W.Y.S.A. 1937–39; (G) Voluntary Officer in connection with evacuation; architectural work in connection with Civil Defence.

Brett: Hon. Lionel Gordon Baliol. Nominated by the Council under Bye-law 34. (A) Watlington Park, Watlington, Oxon; (B) 18 July 1913; (C) M.A. (1st class in History) Oxon. 1935, A.R.I.B.A., Ashpitel Prizeman 1939, author of a Penguin Book on Houses, and numerous articles of architectural criticism; (D) Private Practice; (E) Domestic, Housing, Schools, Civic and Town Planning; (F) Public Relations Committee 1947; (G) A.F.S. 1939, Royal Artillery 1940-45.

Cadbury-Brown: Henry Thomas. Nominated by the Council under Bye-law 34. (A) 17 Clarges Street, Piccadilly, London, W.1; (B) 20 May 1913; (C) A.R.I.B.A., A.A. Dip. (Hons.); (D) Private Practice; (E) —; (F) Member of R.I.B.A. Housing Committee; (G) Royal Artillery 1939-45.

Fisk: Walter William. Nominated by Thos. E. Scott, *Fellow*; R. Gordon Brown, A. Calveley Cotton, F. E. Green, C. St. C. R. Oakes, Frank Risdon, *Associates*; S. F. Burley, *Licentiate*. (A) 16 King Street, Cheapside, London, E.C.2; (B) 12 December 1910; (C) A.A. Dipl., R.I.B.A. Henry Jarvis Student at A.A. 1932, A.A. Henry Florence Student 1933; (D) Private Practice and Teaching; (E) Municipal Buildings, Hospitals, Housing, Hotels and Industrial; (F) Nil; (G) Three years Lieut., R.E.

Holford: Professor William Graham. Nominated by the Council under Bye-law 34. (A) 1 Bank Buildings, Princes Street, London, E.C.2; (B) 22 March 1907; (C) B.Arch., A.R.I.B.A., M.T.P.I., Rome Scholar in Architecture; (D) Official and Private Practice; (E) Industrial, Housing and Public Buildings; (F) Council; (G) —.

Ling: Arthur George. Nominated by the Council under Bye-law 34. (A) 14 St. Peter's Square, Hammersmith, London, W.6; (B) 20 September 1913; (C) B.A. (Hons.), A.R.I.B.A., A.M.T.P.I.; R.I.B.A. Silver Medallist (Essay) 1936; Hunt Bursar 1939; Bartlett Exhibitioner; contributor to technical journals and publications on Housing and Town Planning; (D) Official, with London County Council and City Corporation; previously in offices of private practitioners; at present Senior Planning Officer L.C.C. Architects Department; Teaching—Senior Lecturer in charge of Department of Town Planning, University College 1946-47; (E) Town Planning, Housing, Schools, Commercial Buildings; (F) R.I.B.A. Town and Country Planning Committee 1944-47, Foreign Relations Committee; (G) A.R.P. and War Debris Clearance Work in the City of London, Home Guard A.A.

Martin: John Leslie. Nominated by the Council under Bye-law 34. (A) Volta House, Windmill Hill, Hampstead, N.W.3; (B) 17 August 1908; (C) Master of Arts, Doctor of Philosophy; A.R.I.B.A.; R.I.B.A. Soane Medallist; R.I.B.A. Recognized Schools Silver

Medallist; Joint Editor 'Circle' and 'The Flat Book'; Author numerous articles, e.g. 'Science in Building' (Brit. Assn. Handbook), 'Unit Built Stations' (Arch. Rev.), 'Research and Practice' (Arch. Journal), etc.; (D) Late Head of the School of Architecture, Hull; sometime Asst. Lecturer, University of Manchester; Private Practice 1930-39; at present Principal Assistant Architect L.M.S. Railway Company; (E) Private Practice includes Housing, Schools, etc.; Official Practice includes work in connection with Railway Stations, Hotels, Hostels, Canteens, (F) Sometime member Board of Architectural Education, R.I.B.A. Reconstruction Committee, Architectural Science Board; Member of the Jury Banister Fletcher Essay Prize; (G) Railway Service.

Matthew: Robert Hogg. Nominated by the Council under Bye-law 34. (A) London County Council, County Hall, Westminster Bridge, S.E.1; (B) 12 December 1906; (C) A.R.I.B.A.; (D) Official and Private Practice; (E) General; (F) R.I.B.A. Town and Country Planning Committee and Official Architects' Committee, A.R.I.A.S.; (G) Permanent Staff of Department of Health for Scotland.

Penn: Colin Troughton. Nominated by the Council under Bye-law 34. (A) 69 Piccadilly, London, W.1; (B) 19 January 1907; (C) A.R.I.B.A.; Writer of 'Guide to Official Publications on Building' and, with F. R. S. Yorke, of 'A Key to Modern Architecture.' Edited 'Homes for the People.' (D) Both, at present in Private Practice; for three years National Organizer for A.B.T.; (E) Housing, Industrial, Exhibitions, etc.; (F) 1944-47 R.I.B.A. Council; 1947 R.I.B.A. Public Relations Committee; about 1942-46 Salaried Members' Committee; 1946 Joint Negotiating Committee; (G) —.

Pollock: John Willey. Nominated by G. B. H. Bidwell, H. S. Butcher, L. B. H. Cremer, H. Judson, I. H. L. King, R. L. Passmore, D. S. Pearce, *Associates*. (A) Gable End, Loose, near Maidstone, Kent; (B) 3 September 1903; (C) A.R.I.B.A.; (D) Articled Pupil and Assistant in Office of Private Practitioner 1920–25, Official with London County Council 1925–31, and Kent County Council 1931–47; (E) Housing, Commercial, and all types of Schools; work carried out just before the War has been illustrated in Leading Architectural Journals in this Country and Abroad; (F) Member of Committee of Tunbridge Wells Chapter, S.E. Society of Architects, Member of Committee of Cairo Area M.E.F. Building Technicians Group; (G) Major, Royal Engineers (Works Services), 1941 Garrison Engineer, 1944 O.C. 261 Works Section, 1944–45 S.O.R.E. II (Designs) H.Q., B.T.E., Mentioned in Despatches, Certificate from C.-in-C. M.E.F. for outstandingly good service.

Taylor: Maurice Ewan. Nominated by A. D. Haxton, A. G. R. Mackenzie, *Fellows*; F. J. Connell, W. M. Guild, T. A. Jeffryes, Adam Watson, A. B. Wylie, *Associates*. (A) County Buildings, Cupar, Fife; (B) 4 March 1915; (C) A.R.I.B.A., F.R.I.A.S., M.T.P.I., A.I.L.A., R.I.B.A. Dist. Town Planning, A.A. Diploma Planning, R.I.B.A. Neale Bursary, F.S.A. Scot.; (D) Official and Private Practice; (E) County Planning Officer; Domestic (Lancs. & Somerset); Church (Bucks.); Agricultural (Lancs. & Yorkshire); (F) Member of the South Wales Institute of Architects; Member of the Executive Committee of Town Planning Officers' Section; (G) Civil Defence.

Walker: Winston. Nominated by L. H. Bucknell, *Fellow*; A. Heslop Antrum, F. Glanville Goodin, Patrick McNeil, I. D. F. Picken, Mrs. M. E. Walker, Miss Mary Wall, *Associates*. (A) 143 Old Church Street, Chelsea, London, S.W.3; (B) 9 August 1912; (C) A.A. Diploma. A.R.I.B.A., A.R.Ae.S.; Numerous Articles for Technical and News Journals on Architecture, Politics and Aesthetics; (D) *Official:* Ministry of Works; Air Ministry; *Private:* experience with eminent Architects and in practice on own account; (E) Church, Hotels, Aerodromes, Exhibitions and Films; (F) —; (G) Air Ministry, attached R.A.F. 1938–42; Army (R.E.) 1942–45.

Watson: Clarence Lonsdale. Nominated by Professor H. O. Corfiato, Ian B. M. Hamilton, Hubert Lidbetter, Gordon Stephenson, *Fellows*; K. J. Campbell, Arthur G. Ling, *Associates*; Thomas Sibthorp, *Licentiate*. (A) The Miners' Welfare Commission, Old Queen Street, London, S.W.1; (B) 10 April 1917; (C) A.R.I.B.A., Dipl. Arch., F.R.G.S.; (D) Teacher and Lecturer; Private, Local and Central Government Practice; Formerly Senior Assistant Architect to the Metropolitan Borough of St. Pancras, London, N.W.1, and the Tottenham Borough Council, N.17; (E) Commercial, Industrial, Cinemas, Schools, Housing, Flats and Municipal Buildings; (F) —; (G) Four years Research for the Ministry of Health and the Medical Research Council.

Wynn: William James. Nominated by W. H. Beattie, S. C. Brightling, W. A. L. Hopkins, G. F. Horsfall, S. Kilgour, R. J. W. Watson, D. J. Williams, *Associates*. (A) 18 Greenhayes Avenue, Banstead, Surrey; (B) 18 August 1910; (C) A.R.I.B.A., Diploma Town and Country Planning (Leeds), A.M.T.P.I.; (D) Private and Official Offices; now Senior Assistant Architect, County Architect's Dept., Surrey County Council; (E) Private: Flats, Hotels, etc., 9 years; Official: All Work that is under the jurisdiction of a County Council, 11 years; (F) —; (G) Army, 1941–46.

AS LICENTIATE MEMBERS OF COUNCIL

Bostock: Robert. Nominated by the Council under Bye-law 34. (A) 8 Cromwell Place, London, S.W.7; (B) 24 May 1902; (C) M.A. Cantab. (Architecture), L.R.I.B.A.; (D) Private Practice; (E) General Practice in which housing predominates; (F) —; (G) 1942-45 Assistant Director of Emergency Works, Ministry of Works, in charge of South-Eastern Region.

Cox: Bernard Hugh. Nominated by the Council under Bye-law 34. (A) 19 St. Peter's Square, London, W.6; (B) 14 May 1907; (C) L.R.I.B.A., F.S.I.; (D) Official and Private Practice; (E) Private Practice, mostly Housing; Official Work: Industrial, Hospitals, Schools; (at present with Ministry of Education; (F) R.I.B.A. Council 1944–47; (G) Civil Defence (Warden).

Parkes: Clarence Bertram. Nominated by the Council under Bye-law 34. (A) Chief Architect, Bournville Village Trust, Estate Office, Bournville, Birmingham 30; (B) 8 July 1895; (C) Articles in R.I.B.A. JOURNAL and other Technical Journals; Part Author, 'When We Build Again'; (D) Architect to Housing Trust; (E) Mainly Housing, also Town Planning Research for the West Midland Group on Post-War Reconstruction and Planning; (F) 1938–46 R.I.B.A. Council; several times Member of Council of Birmingham and Five Counties Architectural Association; (G) Service in 1/6 R. War. Regt. in 1914 War; Civil Defence, 1938–45.

Sibthorp: Thomas. Nominated by T. Braddock, H. M. Luyken, *Fellows*; W. H. Beesley, K. J. Campbell, C. H. Weed, *Associates*; F. N. Brayshaw, H. T. Rushton, J. A. Whittaker, *Licentiates*. (A) 19 Frinton Drive, Woodford Green, Essex; (B) 18 November 1908; (C) L.R.I.B.A., P.A.S.I., A.M.T.P.I.; (D) Official Architectural experience; (E) Housing and other Public and Municipal Buildings—with Factory and Commercial Buildings during training; (F) —; (G) Civil Defence Control Training and Decontamination Officer in Poplar 1938–45; Supervision and Organization of War Damage Repairs, Poplar and Wandsworth.

Widdows: Bernard. Nominated by the Council under Bye-law 34. (A) St. Mary's Chambers, St. Mary's Gate, Derby; (B) 29 August 1903; (C) L.R.I.B.A.; (D) Private Practice; (E) Pre-war specialized in Schools, present mainly Industrial; (F) Three times on Council of Notts., Derby and Lincoln Architectural Society; (G) Voluntary Member Royal Observer Corps; Technical Adviser Ministry of Labour North Midlands Region.

ATTENDANCES AT COUNCIL MEETINGS (Session 1946-47)

(UNLESS OTHERWISE STATED THE MEMBERS' ADDRESSES ARE IN LONDON)

THE COUNCIL (9 Meetings)

President: Sir Lancelot Keay, K.B.E. (Liverpool), 9.

Vice-Presidents: J. Murray Easton, 8; Cyril F. Martin (Birmingham), 8; C. G. Stillman, 7; Michael Waterhouse, 8.

Honorary Secretary: †A. Leonard Roberts (Winchester), 8.

Honorary Treasurer: J. L. Denman (Brighton), 8.

Members of Council: Victor Bain (Leeds), 7; Percy J. Bartlett (Nottingham), 6; A. C. Bunch (Leamington Spa), 7; J. Murray Easton, 8; J. H. Forshaw, 5; Frederick Gibberd, 6; T. Cecil Howitt (Nottingham), 9; A. W. Kenyon, 8; J. Nelson Meredith (Bristol), 3; S. W. Milburn (Sunderland), 6; Professor Sir Charles Reilly, 6; Howard M. Robertson, 5; Herbert J. Rowse (Liverpool), 4; C. G. Stillman, 7; John Swarbrick, 9; J. Hubert Worthington (Manchester), 2; F. R. S. Yorke, 8.

Associate Members of Council: Professor Joseph S. Allen (Leeds), 8; Henry Braddock, 8; D. E. E. Gibson (Coventry), 2; J. L. Gleave (Edinburgh), 2; Professor W. G. Holford, 3; Colin Penn, 6; A. Rankine (Hull), 5; Ralph S. Tubbs, 7; R. H. Uren, 9.

Licentiate Members of Council: W. Dobson Chapman (Macclesfield), 3; Bernard H. Cox, 7; Charles Oliver (Hull), 7.

Past Presidents: W. H. Ansell, 0; Sir Percy Thomas (Cardiff), 0.

Representatives of Allied Societies in the United Kingdom or Eire: Northern Province of England: R. Norman Mackellar (Northern Architectural Association), 4; J. S. Beaumont (Manchester Society of Architects), 6; T. M. Alexander (Liverpool Architectural Society), 8; W. E. Biscomb (York and East Yorkshire Architectural Society), 8; Norval R. Paxton (West Yorkshire Society of Architects), 9; D. B. Jenkinson (Sheffield, South Yorkshire and District Society of Architects and Surveyors), 0.

Midland Province of England: S. J. Stainton (Birmingham and Five Counties Architectural Association), 9; Frank H. Jones (Leicester and Leicestershire Society of Architects), 6; W. R. Steel (Northamptonshire, Bedfordshire and Huntingdonshire Association of Architects), 8;

F. A. Broadhead (Nottingham, Derby and Lincoln Architectural Society), 7; A. G. Berry (East Anglian Society of Architects), 8. *Southern Province of England:* Lt.-Col. F. J. Taylor (Devon and Cornwall Architectural Society), 8; S. E. Urwin (Wessex Society of Architects), 9; R. G. Brocklehurst (Berks, Bucks and Oxon Architectural Association), 9; A. E. Geens (Hampshire and Isle of Wight Architectural Association), 7; A. E. Wiseman (Essex, Cambridge and Hertfordshire Society of Architects), 3; Harold Anderson (South-Eastern Society of Architects), 9. *Allied Societies in Scotland* (Royal Incorporation of Architects in Scotland): A. Graham Henderson (Glasgow), 5; Lockhart W. Hutson (Hamilton), 6; A. N. Malcolm (Stirling), 8; *C. E. Tweedie, (Edinburgh), 4. *Allied Societies in Wales:* Johnson Blackett (South Wales Institute of Architects), 0. *Allied Societies in Ireland:* Henry H. Hill (Royal Institute of the Architects of Ireland), 3; R. H. Gibson (Royal Society of Ulster Architects), 0.

Representatives of Allied Societies in the British Dominions Overseas: Gordon McL. Pitts (Royal Architectural Institute of Canada), 0; L. Sylvester Sullivan (Representative in United Kingdom), 7; Professor Alfred S. Hook (Royal Australian Institute of Architects), 0; J. Hubert Worthington (Representative in United Kingdom), 2; H. L. Massey (New Zealand Institute of Architects), 0; J. Murray Easton (Representative in United Kingdom), 8; D M. Cowin (Institute of South African Architects), 0; †E. Berry Webber (Representative in United Kingdom), 1; H. N. Dallas (Indian Institute of Architects), 0; †A. J. A. Illingworth (Representative in United Kingdom), 6.

Representative of the Architectural Association (London): Graham R. Dawbarn, 4.

Representative of the Association of Architects, Surveyors and Technical Assistants (now the Association of Building Technicians): Andrew C. H. Boyd, 5.

Chairman of the Board of Architectural Education: A. B. Knapp-Fisher, 6.

Chairman of the R.I.B.A. Registration Committee: Darcy Braddell, 6.

Chairman of the R.I.B.A. Official Architects' Committee: †C. H. Aslin (Hertford), 8.

Representative of the R.I.B.A. Salaried Members' Committee: †P. K. Hanton, 8.

*Marked thus died 11 February 1947. Possible attendances, 5.

†Marked thus were appointed at or after the first meeting of the Council. Possible attendances, 8.

Book Reviews

A Plan for the City and County of Kingston-upon-Hull, prepared for the City Council by *Sir Edwin Lutyens*, O.M., and *Sir Patrick Abercrombie*, M.A. 14 ins. × 10 ins. xii + 92 pp. 13 maps, 46 plates. London and Hull: A. Brown & Sons. 1945. 15*s*.

On opening this report in its handsome dust cover with the rich traditional quality of heraldry and tapestry, there is found a foreword by the Chairman of the Reconstruction Committee. His words seem the keynote to all that follows, for he stresses the desire of the Corporation to build a noble gateway that will be a credit to their day and generation, as the only fitting tribute that could be paid to the devotion and courage of a brave people.

The report is to be regarded as a signpost to point out the road to a destiny that will be not unworthy of the great victory the people of Hull helped to secure.

In assessing the very high merit and quality of the report from the point of view of its value as a planning inspiration, an architectural conception and as an example of presentation bordering on magnificent, it is necessary to carry in mind the fact that the purpose was to promote a level of thought comparable with that required to create a splendid memorial.

This air of civic distinction is in tune with the first essay in planning in this area, evidenced by the great development conceived under King Edward the First. It is a study for the 'second re-founding' of the great port on the Humber, and has about it something of the flavour of the Bayeux Tapestry. It depicts an epic of history with the same richness of detail and colour, the same evidence of co-operative understanding and the same patent draughtsmanship and skill in execution. This touch of medieval glory seems most fitting in the light of Hull's origin as a city planned by Royal Command in the golden age of the fourteenth century.

It is evident all through the report that the planners held the view that for Hull the threshold of maturity lies just ahead after surviving a second local tragedy.

No doubt to the people of Humberside, some 600 years ago, the sight of their flourishing town of Ravenser devoured by the waters of the estuary gave as shocking a sense of a visitation as did the destruction by the enemy's 'aerial navies' to the people of Hull in the last few long years.

History is now only repeating itself again in the city, for today democracy is doing precisely that which was first done by the monarchy, planning a first-class town at the confluence of Hull River with the Humber.

In those old days the policy involved exchange of land 'careful scrutiny and royal determination', the planning of a new road system, the building of civic buildings and the founding of new river crossings. Fourteenth century Hull was planned, we are to understand, for its role as a great city with a 'Garden City' density and plenty of space within the walls. Medieval Hull still stands clear and well defined within a belt of open space, still the strongly beating heart of what may be one of our best planned great modern cities.

This speaks well of planning and, if proof is still needed, gives proof that a place well founded on a plan can thrive well on into eternity. When we read that by Charter granted in 1331 the ownership of the site of the town was vested in the burgesses, can one escape the question—are we so much further on in this year of lack of Grace with our 1946 New Towns Act, conferring on a Corporation the ownership of a designated area? Are we so much more social minded in our day and generation than other City Fathers for all the battle-cries and bugle calls?

The Historical Review in 'Kingston-upon-Hull' is an enchanting chapter bringing to our mind's eye pictures of the old town walls, remarkable in that they were built in brick from the town's brickyard, of the brick church, the citadel—the pride of the High Sheriffs, the building of docks, the architectural glory of Suffolk Palace, scenes connected with the production of wool, the import of wines and of whalers leaving the port for far away frozen seas. The industries of Hull were many and varied and it is not surprising that up to the time of the war she was the third port in our country.

In the chapter describing the pre-war town the authors refer to the Civic Diagnosis Survey, the well-known work organized by Mr. Max Lock, and they indicate that the evidence so available enabled them 'to proceed straight to display the proposal for The Plan of Hull'.

In judging the Plan we are to picture Hull in a Regional setting 'as a self-contained urban unit, situated in a rural region', and are to take into account that 'five-sixths of the population of East Riding live and work in Hull, enveloped in its open country, edged with its " irrestible " coast line.'

The background for the finely drawn new plan is built up of a coastal section with 30-ft. cliffs; the Hull Lake, by contrast a perfectly flat bed, and the wolds kept in a high state of arable cultivation. This must be remembered, as also the statement that 'Hull belongs to the world rather than to a locality'. Most people on the deck of a ship would be conscious of this, buoyed on the black water of the Humber on a night full of rain, waiting for the ship's siren to notify the sleeping town that course was being set for the ports of Scandinavia and the waters of the Baltic.

The description of the bomb damage brings out in clear relief the special difficulties created by the widespread scattering of the damage, as from an out-size cannon shell. Many so created opportunities however manifested themselves to the planners. Nearly half the shops were destroyed, and housing areas laid bare were ripe for redevelopment on account of the decayed condition and overcrowding of the property. This provides an unusual opportunity for the use of architectural skill.

A reconstruction policy is recommended based on 'the periodic carrying out of a comprehensive scheme for reconstruction', until at the end of three, four or five year periods the whole necessary radical scheme would be accomplished. There is what should be an effective measure suggested—that buildings still surviving in war damaged areas should be 'allotted a life'.

There is conviction that the unavoidable short term re-building scheme should be the beginning of wholesale reconstruction, covering re-planning for modern standards of transport, industry and health. The improved conditions are felt to be 'the compensation to Hull which may go some way to make up for the suffering, loss of trade,

inconvenience and squalor of the war (and now post-war) years'.

To sum up the intelligent lines of thought in the report there are four major requirements enumerated:—

1. The blot of bad central housing must be erased.
2. The lack of a large scale shopping centre must be made good at once.
3. Facilities for industrial location must be provided.
4. Road and rail improvements can and should be put in hand.

The latter improvement might be capable of achievement if nationalization of the railways spurred the Government to give a lead in the matter of the removal of sections of line that cast shadows over the hearts of towns as does the railway ring at Hull. For a solution, the report contains a magnificent proposal that it should be raised aloft on a high level viaduct.

It would be wrong to go without calling attention to the illustrations. The maps are ornaments to the report and there is a jewel-like quality about the use of colour. In interesting contrast there are fascinating little diagrams like engravings illustrating railway problems, proposed car parking facilities and the suggestions for the improvement of the River Hull. The creation of precincts is recommended with a view in part to relieving the appalling accident conditions.

The general impression of optimism engendered by the report is expressed in the note that 'with the considerable force of the latest road-making machinery and workmen skilled in its use released from the war, together with the opportunity offered by the war damaged and cleared sites, the chance to put an end to these conditions is not to be missed'. This same breadth of vision is illustrated by the generous allowances proposed for industry, representing the immediate redoubling of industrial site areas for modern requirements.

The plan for industry includes the bringing together of the scattered factories and workshops of all types.

A barrage scheme, which again would provide scope for fine architectural treatment, is included for Hull River to make sheltered waters for ships and lighters, and to link all the docks to the East and West with Hull River.

To architects it is probable that Chapter 10 dealing with the Centre of Kingston-upon-Hull will prove the most absorbing. This is illustrated with some delightful drawings by J. D. M. Harvey, showing the intentions for the inevitable Civic Centre.

The plan for the Centre is clever in that the conventional solution of a Park Ring has been resisted, while certain existing components, such as Queen's Gardens 'already marked out as a Civic Square of noble proportions', and Ferensway 'the ambitious and laudable attempt at a great architectural street' have been respected. In the words of the authors, 'a whole volume might well be written upon the central aspect of Hull alone'.

As planned the City Centre precinct consists of four parts; Queen's Gardens are to be the heart of the civic and cultural centre, Osborne Street the shopping centre axis, the old town is to represent the sea-going life of Hull and the George Street area is to contain as its principal structural feature the future approach from the Terminal Station, planned to replace the Paragon. This broad tree-lined avenue would give to Hull 'a promenade of fine proportions and a dominant focal centre from which the main activities of city life may radiate'.

The architecture of this grand central boulevard is intended 'to vary in character from the quiet civic dignity of Queen's Gardens to the gaily decorated theatres and on to the domestic architecture of the hotels at the Northern end'. How much more often than has yet proved the case, does one desire to see architects given such opportunities; not to plan on paper alone but to achieve the execution of the project?

There are to be new parks; the Pierhead Park to be planned informally with a small lake and canal, with an open-air theatre and an amusement centre. The Citadel site now used for timber storage is to be recovered for public use, the frontage to be a riverside park thickly planted with trees, and a triangular site behind to have a large six-storey high group of flats to house 3,870 people, making a Neighbourhood Unit almost entirely surrounded by water.

The periodic programme on which the plan is to be realized is most methodical and reasonable. The proposals are finely conceived and show that no 'orgy of destruction' is visualized, though a development equal to the great expansion since 1900 is envisaged. At the outset the reconstruction is limited to vacant and blitzed sites. Subsequently the outdated street pattern and obstructive elements are to make way for something more akin to the needs of today and the future.

It is said that 'cost cannot be the determining factor since reconstruction by stages merely co-ordinates expenditure of normal peace-time building projects'.

Hull, in common with many of our cities, has an unavoidable problem of overspill. A new town or satellite is recommended to accommodate this overspill in a single location, on or near the lovely park of Burton Constable with its historic mansion. A detailed plan for this is included in the report, and this implies a second chance to create something beautiful out of the flatness of the Holderness plain.

The whole question of community centres, open spaces and the treatment of urban sites and land utilization generally is dealt with in a most exemplary way. The basis is that human fitness can only be achieved by the simultaneous development of an active, healthy body and mind, two faculties inseparable and indispensable to one another.

The plan is to be thought of as a means to an end 'to transform it from an elaborately coloured and annotated ordnance map into a real place in which human beings can live, work and recreate themselves in body and spirit'.

The motto of King Edward the First, practical creator of the system of government by assent of the Commons, and actual creator of Kingston-upon-Hull, was 'KEEP TROTH'. May it be possible for the City Council to do likewise.

J. F. ADBURGHAM [*L*]

City of Baroque and Gothic, by *Karel Plicka*. Introduction by Martin S. Briggs, F.R.I.B.A. 4to. pp. 228. Photographs 208. London: Lincolns-Prager. 1946. 42*s*.

This book is a fine example of what a photographic record of a city should be. It is true that Prague of all cities offers exceptional chances to the architectural photographer, but even so, praise of the highest order is due to the producer of the magnificent plates which fill this volume.

Mr. Karel Plicka, who has contributed the 208 photographic plates, is certainly to be congratulated on his results, which can only have been made possible by his obvious skill as photographer and sympathetic knowledge of the architecture and sculpture which he has portrayed. Many of his interiors are superb, and will, indeed, gladden those who love the rich grandeur of the Baroque.

Mr. Martin S. Briggs, that notable authority on Baroque, has written a brief but most appropriate introduction to the book, which he ends by saying: 'Prague . . . is now engaged in a town planning scheme, with ring-roads and by-pass roads and other desirable features, but at its heart it will always remain a "City of Baroque and Gothic" '—let us hope this is so—it will certainly be the desire of all who are lucky enough to get a copy of this volume of Mr. Karel Plicka's photographs to remind themselves that architecture is not necessarily at its best under a regime of austerity.

F. R. YERBURY [*Hon. A*]

The Work of the Birmingham Civic Society from June 1918 to June 1946. Compiled by William Haywood. pp. 170. Birmingham Civic Society. 1946.

The Birmingham Civic Society, which was established in 1918, published an account of its work during the first sixteen years of its existence; this record has now been enlarged to cover a further twelve years up to 1946.

The chief aim of the Society is 'to work for a more beautiful city'. This well produced volume shows how much has in fact been done, influence being brought to bear on a great number and variety of items, from the standard of design of telephone directories and street lamps to larger matters connected with recreation grounds and town planning. The Civic Society, which is a voluntary association with no statutory powers, is to be congratulated upon having obtained and retained the confidence of official local opinion and thus, in so many instances, painlessly achieved its objects.

A Guide to Official Publications on Building. By *Colin Penn*. With a foreword by Professor J. D. Bernal. pp. 120. Archl. Press. 6*s*. 1946. [1947].

Professor J. D. Bernal in his foreword to this book writes 'One of the major difficulties of our time is to relate rapidly increasing knowledge to the capacity of the human

mind to assimilate and use it.' Few architects can attempt to read, let alone digest, the ever-increasing flood of official publications covering research and development in building technique. Some fifteen years ago the R.I.B.A. published a list, comparatively short, called 'Official and other Publications containing Building Regulations 1931'. Mr. Colin Penn's book, published under the auspices of the R.I.B.A., is a development of this idea. It contains an index to over 7,000 sources of information, on subjects ranging from small fitting to neighbourhood planning, and for quick reference will be found of great use to architects.

A History of Architecture on the Comparative Method, by *Sir Banister Fletcher*. 13th ed. (Jubilee edition). 4to. pp. xxx + 1033. Over 4,000 illus. B. T. Batsford. 1946. £2 12*s*. 6*d*.

This standard work, first published in 1896 and later many times revised, has now been republished in a 'Jubilee Edition'. The illustrations have steadily grown in number from 100 to 4,000, and many of them in this edition are reproduced to a slightly larger scale.

At a time of austerity in book production, the publication of a volume of this nature is itself an indication of the importance which is attached to its being readily available to students of architecture.

Practical Geometry for Junior Builders, by *Leslie A. Lee* and *Fraser Reekie*. 4to. pp. viii + 215. London. Edward Arnold & Co. Price 5*s*.

A thorough grounding in the principles of Plane and Solid Geometry is invaluable to those engaged in building, whether as architects, surveyors or builders. This book deals simply and comprehensively with the main principles, which are further developed in 'Descriptive Geometry for Architects and Builders' by the same authors.

How to Estimate, by *J. T. Rea*. Ninth edition, 4to. pp. xvi + 714. London. B. T. Batsford. 1946. 18*s*.

The ninth edition of this book contains additional information on increases in cost of labour and materials from 1936 to 1946. Owing to present-day conditions no general revision of prices has been attempted. Nevertheless the technical data is a valuable guide in estimating and checking accounts, and the numerous illustrations are most useful.

CHARLES WOODWARD [*A*]

Rooms and Furniture. Edited by H. Guyer and E. Kettiger. pp. 168. Photos 500. Association of Swiss Interior Architects. Erlenbach-Zurich. 1946. Price 29.20 fr.

Reconstruction and the Home, by *Howard Robertson*. Sm. 4to. pp. 87. The Studio. 1947. Price 7*s*. 6*d*.

Rooms and Furniture, or Möbel und Wohnraum, or Meubles et Aménagements Intérieurs, to give it its tri-lingual titles, is yet another of those international volumes on the arts for which Switzerland is now so famous. This well-produced and beautifully printed book is no exception to what we expect almost as a matter of course. The subject matter is introduced in an essay by Peter Meyer, which takes as its thesis the relationship between housing and clothing, emphasizing that both are (literally) the forms of shelter which are closest to humanity. This rather forced argument logically leads to coat cupboards and hat racks in the early stages of the excellent illustrations which, however, quickly leave the entrance hall and thereafter roam through the whole world of living-room furniture. In the course of over 150 pages of photographs and detail drawings, the superiority of wood, with all its beauty of texture and its innate toughness, is shown as the ultimate expression of the synthesis of traditional material and modern structural design. There is a significant lesson to be learnt from these fine pieces: it is that 50 years ago our own advanced designers were producing cupboards and bedsteads which were not in any degree less integrated than the best of those illustrated. This is not to deny the freshness and originality of the many beautiful examples from Switzerland, but it further confirms the belief that a 'period' of furniture design, which has long been maturing since its foundation in this country, is here to stay as a settled vernacular for many years to come.

Mr. Howard Robertson has developed *Reconstruction and the Home* from a series of articles written for *Art and Industry*. They begin with a stimulating essay on 'The Building', and end with further stimulation of a more general character under the title 'Summing Up'. Mr. Robertson is the author of standard works of far greater significance than these collected articles, and the book is disappointing to one who, in his admiration for both the work and written thought of Howard Robertson, wishes to find in everything from his pen controversial contribution to the analysis of architectural development. Two positive and significant suggestions of a general architectural character are put forward by the author. The first is that we should again develop the 'gable facing the street' in our designs for terraces; this could well bear examination. The second is the plea for a concerted effort towards modernising and replanning old houses of character. In this case a good deal has already been done through force of circumstances, and it is to be hoped that further successful work will be undertaken in lieu of demolition and reconstruction in those areas which might well be preserved if properly handled. The production of this book is not very happy.

H. A. N. BROCKMAN [*L*]

Sanitation, Drainage and Water Supply, by *G. Eric Mitchell*. 4to. pp. 192. George Newnes. 1946. Price 12*s*. 6*d*. (New ed. of Modern Sanitary Engineering.)

This may be regarded as a very comprehensive book—perhaps too comprehensive for its length, some 190 odd pages—dealing with the site and orientation of buildings, damp prevention, ventilation, water heating, water supply (including bye-laws), drainage, sanitary fittings and sewage disposal.

The treatise is stated to be for the use of architects, surveyors, engineers, medical officers of health, sanitary officers, builders and students—a truly wide and varied public. In consequence, while parts of this work may be of interest to one reader they might be either trite or incomprehensible to another.

The general sense of over-crowding is mitigated by a generous use of illustrations and diagrams which—as stated in the preface—'have been used to convey as much information as possible so as to reduce the amount of printed matter'. This expedient has been well carried out; but even so, much of the information contained is either unnecessary to the professional architect or engineer, or is insufficient. For instance, the instruction on plenum ventilation, would be of little value to the practising architect, the surveyor, the engineer or the medical officer, and if such had to install a ventilation system and did not know more of the subject than that contained in the book, he would be wise to engage an expert. On the other hand, while the admonition that 'the small house must be planned to provide the accommodation required without waste of space' is an axiom probably obvious to every student, the hint that 'the proximity of bathroom and W.C. to kitchen avoids unnecessary plumbing' is certainly a matter that he might possibly overlook.

It seems a pity that this work is so extremely 'elementary' and 'advanced' in its treatment of its subjects. Nevertheless, the reader may safely turn to it for an introduction to, and a general survey of, the several subjects treated, and he will not be disappointed provided he does not expect it to contain the whole duty of man.

A. H. BARNES [*F*]

Outlines of Paint Technology, by *Noel Heaton*. 3rd ed. pp. xi + 448. Plates 11. Illustrations 73. Charles Griffin & Co. 1947.

This new edition of an earlier work, of which a copy has been received from the author, has been extensively revised to bring it up to date.

Building Science for Junior Technical Schools of Building, by *R. R. Butler*. 4to. pp. 204. The English Universities Press. 1946. Price 6*s*. 6*d*.

This book is one of a series comprising—besides 'Building Science'—'Trade Drawing,' 'Mathematics,' 'Carpentry and Joinery' and 'Engineering,' all of which might well be regarded as playing a more or less important part in 'Building Science'.

Mr. R. R. Butler's book, however, is mainly a text-book on chemistry extended to include such subjects as the nature of heat, and its effects on matter. His treatise is essentially elementary (i.e. in the general as well as technical sense), and he thereby achieves his object in presenting 'those fundamental aspects of Building Science which should be

included in a two-year course in a Junior Technical School of Building.' (Incidentally, a perusal of the work has proved the possibility of its interest to at least one of the more elderly students.) It is, however, a book for the beginner, and as such, should be most valuable in engendering a scientific outlook in the early stages of technical education.

The most important feature of the book is the method of its presentation. The author has the happy knack of drawing attention to some characteristic of something calculated to awaken the reader's interest and to prompt a question which, before it can be framed, is given a lucid answer.

While the subject, in as far as it is elementary, is treated in a general way, the illustrations and examples used are mainly drawn from building materials. By this simple expedient the author justifies the hope expressed in his preface in the following words: 'Whilst the principles of scientific knowledge and method have been applied to the problems of the building trade, their wider application to other aspects of modern life will, it is hoped, provide the young student with material for a fuller appreciation of the influence of applied science on human activities'.

A. H. BARNES [*F*]

Rural Housing, 1946. Report of a Conference held at the Housing Centre on 3 May 1946. pp. 24. Housing Centre. 1946. Price 2*s.* 6*d.*

The proceedings of the Conference are of particular interest to officers and members of rural authorities. Dr. W. B. Stott's paper on 'Rural Housing Survey' gives details of the classification for houses laid down by a joint Committee in the County of East Suffolk, and of the results obtained by the surveys carried out in the areas of Cuckfield and Uckfield Rural District Councils.

Mr. J. Brian Cooper makes a well-argued case for temporarily increased subsidies in rural areas in order to provide houses at rents which the agricultural worker can afford to pay.

This pamphlet would be useful to an architect undertaking his first rural housing scheme—it would not help one experienced in that field of work. C. B. PARKES [*L*]

Homes for the People, by a Committee of the Association of Building Technicians. 8vo. pp. 182. Photographs 24. Paul Elek. 1946. Price 7*s.* 6*d.*

A Committee of the Association of Building Technicians wrote this book for the layman as a brief but comprehensive guide to housing.

It deals principally with planning and modern building technique, but it starts with a short summary of the problem and ends by telling the reader 'How to get good housing'.

The technical chapters are clearly written and well illustrated; they constitute a very readable and concise treatise on modern construction as applied to domestic buildings.

Members of local authorities should gain much from reading this book—in particular, the knowledge that, although they are responsible for policy, the services of good architects are required to interpret it effectively in bricks and mortar and even in pre-fabs.

Architects will find the book useful as a yardstick by which to measure present achievements in State-aided housing against the enthusiastic hopes of 1945, when such statements as 'Steel is still plentiful in this country' (page 92) could be said with sincerity.

On the whole, the chapters dealing with policy are less convincing than those concerned with construction. C. B. PARKES [*L*]

Homes by the Million. An account of the housing methods of the U.S.A. 1940–1945. *Hugh Casson.* ob. pp. 48. West Drayton. Penguin Books. 1946. Price 2*s.*

In four years the United States rehoused nearly eight million people, more than half of them in new communities. This well-written book describes the organization set up by the Federal Government and illustrates by carefully chosen examples the high standard of design achieved in many of the prefabricated houses and in the estates on which they are built.

Although necessarily brief, the chapters dealing with landscaping, community buildings and tenants' organizations are inspiring; they cannot fail to emphasize the shortcomings of most of the temporary housing schemes in this country.

C. B. PARKES [*L*]

Hudson on Building Contracts, 7th Edition, by *Lawrence Mead, B.A., Barrister-at-Law.* pp. lxxxiii + 624. Sweet & Maxwell, 2 & 3 Chancery Lane, W.C.2. £3 15*s.*

This well-known work has again been brought up to date by the issue of the 7th edition, which includes recent law cases. The legal liability of the architect is exhaustively dealt with as is also that of the quantity surveyor. Both professions should have this knowledge and the possession of this volume provides easy reference to that side of a practice as well as to the many legal points that arise out of building contracts.

CHARLES WOODWARD [*A*]

The Practice of Design. Edited by Herbert Read. 4to. pp. 227. Lund Humphries. 1946. Price 25*s.*

This well-illustrated manual consists of a dozen articles on design, mostly by members of Dr. Herbert Read's Design Research Unit. Four of the articles are concerned with Architecture, three with Textiles, Pottery and Printing, and the remainder deal with design more generally. Dr. Read contributes an introduction.

Attractive at first glance, the book suffers on better acquaintance from uncertainty of purpose. It does not pretend to cover effectively all the main consumer's industries from the design point of view (it would be much more valuable if it did). On the other hand a symposium of this sort by writers of very uneven ability cannot hope to give a comprehensive picture of the problems of industrial design in general. Dr. Read, in an effort to fill the gap, has written a curious essay in which a delightful lucidity of phrase reveals all too clearly a surprising inconsistency of argument. The first half of his article may be summed up in this sentence: 'The danger we run, in a machine age, is that we sacrifice altogether one set of values—the personal, symbolic and decorative values—and confine art to an intellectual pre-occupation with form and function. We might as well try to hop through life on one leg'. The second half in this: 'We can admit the virtues of hand-made things, the vitality of organic forms, the nervous sensibility of the hand-traced line—we can admit all these virtues in the arts of the past, *and then renounce them*! We can renounce them because we have an alternative set of virtues, virtues which arise out of the actual processes of machine production, virtues which we claim are equal if not superior to the virtues of the hand crafts'. To one reader at least this seems as neat a piece of confusion as one could wish for.

Of the other writers, all are experts on their subjects. Alastair Morton and Victor Skellern are informative and interesting on the technicalities of textile and pottery manufacture; Robert Harling discourses pleasantly on printing, and gives some curious facts about newspapers; Mischa Black contributes a delightful essay on Design for Ceremony and Exhibitions, and Milner Gray explains the significance of the affix R.D.I. The best summary of the Design situation is that given by Norbert Dutton.

It would be ungrateful, writing in this JOURNAL, to suggest that the book might have been improved if less space had been given to architecture. But there are obvious overlaps in this section—no fault of the individual writers, but regrettable in so short a book from which so many crafts and industries have been omitted.

Design, like all professions, is building up its own jargon which will soon be as tiresome as any other. 'In the case of the walling of this building the constructional method utilized a series of light posts . . .' presumably equals 'we built the walls of light posts . . .' It is therefore some relief to find in Felix Samuely's article on Design for Speed a series of statements of really staggering simplicity such as: 'If the ship is stationary the smoke would go straight up, but a long, almost horizontal cloud of smoke is a direct result of the speed of the ship' or 'Trains usually consist of a locomotive, a tender, and a number of coaches.' Mr. Samuely in being asked to write this article was surely cruelly mis-cast.

The book sets out to be in itself an exemplar of modern typographical design. It is perhaps therefore not unfair to complain that some of the facing pages do not seem to have been considered in relation to each other (which with this kind of binding matters more than usual) and that a type face has been chosen in which 5's and 3's are indistinguishable except with a microscope. Nor are the colour plates, with their fashionable but apparently meaningless geometricalities, to the taste of this particular reviewer. LIONEL BRETT [*A*]

The Architects' Benevolent Society

Annual General Meeting

Sir Lancelot Keay, K.B.E., President of the Architects' Benevolent Society, presided at the Annual General Meeting of the Architects' Benevolent Society on 6 May held at the R.I.B.A. Sir Charles Nicholson, Hon. Secretary, presented the Report for the year 1947, and Mr. Goodhart-Rendel, Hon. Treasurer, presented the accounts and balance sheet. The President moved that these be adopted, and the motion was carried. In moving the adoption of the Report the President, Sir Lancelot Keay, said: 'Whilst a study of the Report will show that the position of the Society is satisfactory, I feel bound to express regret that the response to the Half-Crown Appeal was not greater despite the very generous contributions made by some members of the profession. The times are difficult, but the needs of those who look to us for help are pressing.

'The Council has decided to issue special collecting boxes. I hope these will find their way into most of the large offices of the country, and that through this new venture we shall be assured of a regular and substantial contribution to our funds. There must be many assistants who could drop 2*d.* a week into the office box—the price of one cigarette. If they would only do this it might bring us in £1,500 a year. I commend this new venture with confidence.

'In common with those holding investments of a certain character our income may fall. It is important, therefore, that we should take steps to make up the deficiency. It will be an achievement which will bring joy into the lives of many if at the same time we so increase our income as to warrant help being given in greater measure and to a larger number of applicants.

'Great interest is being shown today in the housing of aged persons. As one travels through the country there are many reminders of what other bodies have done for their aged and afflicted. To make a suggestion which the Society cannot carry out may be thought to be an indication of a lack of responsibility. I know, however, that in all the work which I have done none has brought greater relief to those in the autumn of their life than the provision of dwellings for the aged and infirm. What satisfaction it would give us who design such buildings for others to be responsible for a scheme which would help the dependents of the less fortunate members of our profession. The one cigarette a week which I am sure would not be missed by any of us would bring in sufficient to provide a dwelling and its site each year. And where better could they be sited than in one of the "New Towns" which are to be the work of architects'.

Officers and Council for the Year 1946-47
President: Sir Lancelot H. Keay, K.B.E., President, R.I.B.A.
Vice-Presidents: Sir Harry Vanderpant, Barrister-at-Law [*Hon. A*]; Sir Banister (Flight) Fletcher, D.Litt., F.S.A., F.S.I. [*F*]; Sir Charles A. Nicholson, Bart. [*F*]; Mr. H. Greville Montgomery [*Hon. A*]; Mr. H. S. Goodhart-Rendel [*F*]; Mr. W. H. Ansell, M.C. [*F*].
Ordinary Members: Mr. J. Stanley Beard [*F*]; Mr. G. D. Gordon Hake [*F*]; Mr. A. L. Roberts [*F*]; Mr. A. E. Wiseman [*F*]; Dr. C. H. Holden [*F*]; Mr. C. H. James [*F*]; Mr. A. B. Knapp-Fisher [*F*]; Mr. H. Lidbetter [*F*]; Mr. D. L. Solomon [*F*]; Mr. P. V. Burnett [*F*]; Mr. F. R. Hiorns [*F*]; Mr. G. E. Soulsby [*S*]; Mr. M. Tapper [*F*]; Mr. C. Woodward [*A*]; Mr. Francis Jones [*F*] (representing the Manchester Society); Mr. C. M. Hadfield [*F*] (representing the Sheffield, South Yorkshire and District Society); Mr. Ernest Bird [*F*] (representing the Hampshire Society).

Pensions and Grants: Relief was given in 98 cases during the year, of which 22 referred to Architects or Architects' Assistants, 64 to Widows, and 12 to Orphans. Nine were applying for the first time. Four pensioners died during the year, and the vacant pensions were awarded to three Architects—one a disabled ex-service man—and an Architect's widow. A grant was made from the Maurice Webb Memorial Fund towards the expenses of illness and death of an Architect.

Finance: There has been a small but welcome increase in the number of subscribers during the past year, and also in the number of Seven-Year Covenants signed, and the additional funds thus provided will mean more help for those who need it. Legacies and Capital Donations received during the year have enabled the Council to invest £1,500 in 2½ per cent Consols.

Donations received during the year, for which the Council is most grateful, include £100 from Mr. Digby Solomon to be used for special emergencies where immediate help is needed without waiting for a Council meeting; £61 2*s.* from Mr. Stanley Beard, to bring his total contributions up to £100—an idea which the Council hopes will appeal to others; £52 10*s.* each from the Institute of Registered Architects and Mr. E. O'Shaughnessy; £52 from an anonymous donor; £50 from Mr. and Mrs. Albert Kingwell, and from the South-Eastern Society of Architects, and the same amount from the South Wales Institute of Architects as the proceeds of a Dance held in aid of the Society—another excellent idea to follow; £30 from the A.A. Students' Club, with an additional £15 8*s.* as the result of a raffle for a case of instruments; £1[illegible] 10*s.* each from Mr. R. S. Coulthard, the Suffolk Association of Architects, and Mr. E. H. Waugh of Johannesburg, who sends his donation 'as a sign of my great interest in and appreciation of your Red Book'; £10 from Messrs. Matthew Hall & Co. Ltd.; £7 7*s.* from Mr. H. D. Hendry; and £5 5*s.* each from the Brighton, Croydon, and Tunbridge Wells Chapters of the South-Eastern Society of Architects, the Hertfordshire Chapter of the Essex, Cambridge and Hertfordshire Society of Architects, Mr. T. C. Howitt, Mr. C. H. MacKeith and the Tylers' and Bricklayers' Company. To all the Allied Societies, Architects' departments and offices who have contributed from periodic collections the Council offers its warm thanks.

Half-Crown Appeal: The President issued an Appeal on behalf of the 'Half-Crown Fund' just before Christmas, and over £600 had been received by the close of the year. Later donations brought the total up to £869 19*s.* 7*d.* Among the larger donations were £50 from Mr. Ernest Bates; £25 from Mr. Digby Solomon; £21 from Sir Banister Fletcher; £10 10*s.* each from the President, Mr. S. Clough and Mr. A. T. Scott; and £10 each from Mr. J. H. Belfrage and Mr. H. V. Lobb.

The appeal was sent out partly by post, partly as an inset in the R.I.B.A. JOURNAL, and was reproduced in the technical press through the kindness of the Editors, including THE ARCHITECT AND BUILDING NEWS, ARCHITECTURAL DESIGN AND CONSTRUCTION, THE ARCHITECTS' JOURNAL, and THE BUILDER. The Society was thus able to reach many Architects without a heavy expenditure on postage, and the Council is most grateful for this co-operation.

Collecting Boxes: The Council decided this year to issue special collecting boxes for use in Architects' offices and departments, and in Societies connected with Architecture, for the collection of small sums from those who are not able to afford a large subscription. The boxes are now ready and may be obtained on application to the Society's offices. The Council hopes that many architects will make use of these boxes to swell the Society's funds from their own and their colleagues' small change.

Insurance: The commission received from insurances taken out through the Society's agency has been, as usual, a most valuable addition to the funds available for the relief of distress. This commission is considered as a donation from the policy-holders, and is thus acknowledged in the subscription lists. The Society welcomes enquiries for all types of insurance, and in certain policies can offer special terms.

In connection with insurance, the Council wishes to express its thanks to the ARCHITECTS' JOURNAL and the R.I.B.A. JOURNAL for free advertisement space, representing considerable value, which has been given during the year in spite of the continued paper shortage.

Review of Construction and Materials

The aim of this section of the JOURNAL is to provide technical and general information likely to be of use to architects. It is compiled from various sources, but principally from individual experts and official and industrial research bodies, thus ensuring that the information given shall be as accurate as possible. The number of bodies dealing with specialized branches of research is large, but the following exist for the service of architects and the building industry, and will willingly answer inquiries.

The Director, The Building Research Station, Garston, near Watford, Herts. Telephone: Garston 2246.

The Director, The Forest Products Research Laboratory, Princes Risborough, Bucks. Telephone: Princes Risborough 101.

The Director, The British Standards Institution, 28 *Victoria Street, Westminster, S.W.*1. *Telephone: Abbey* 3333.

The Technical Manager, The Building Centre, 9 *Conduit Street, W.*1. *Telephone: Mayfair* 2128.

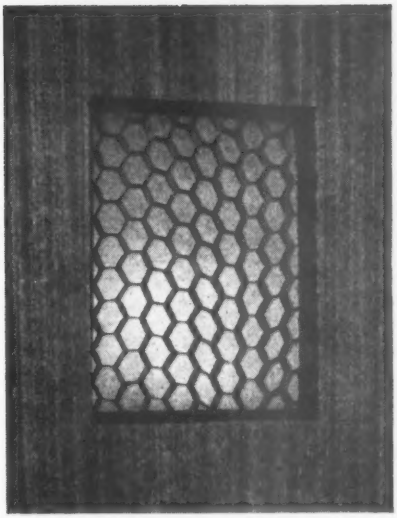
British Industries Fair.: After an interval of eight years the B.I.F. opened again this month. It was held concurrently in three buildings; in London, Olympia contained chemical products, china, glassware, cutlery, jewellery, scientific apparatus, office equipment, stationery sundries and sports gear; at Earls Court, textiles, furnishings, leather goods, plastics and carpets were shown. Castle Bromwich, Birmingham, contained hardware, building, electrical and engineering exhibits. Press day for this JOURNAL falls too early in the month for this issue to do justice to the exhibitions, but it is hoped to give information in the June JOURNAL about some of the exhibits related to building. Although on the Press pre-view day at Castle Bromwich few of the stands were completed it was possible to see that a great advance has been made, especially in the case of those firms who carried out war work which involved finding the solution to urgent problems. The experience and information thus gained is now being applied in waging the peace, and the Fair shows the general trend in the design and construction of articles which we hope soon to be able to buy and install in post-war buildings.

While there has been a seven-years gap in the production of materials and equipment for ordinary building, there has been immense progress in the metal industries, in plastics, in new forms of timber, in adhesives, in surface finishes and in power tools. New techniques need time for their full application to building requirements, and it is still too early to forecast accurately their full effects. One example of the *kind* of thing that is happening must suffice. One-pipe drainage for houses is now carried out in steel. Before the war the certainty of rapid corrosion made this impossible. To-day for prefabricated houses sets of steel soil and waste stacks are welded up on jigs, treated with a rust-inhibiting process and galvanized. Accelerated tests of life have shown that these stacks will last as long, if not longer, than cast iron stacks coated with Dr. Angus Smith's solution. Being fitted with adjustable copper deep seal traps they make allowance for the inevitable small dimensional differences in assembly of the house, and permit the system to be used in traditional building where a sufficient number of identical plumbing layouts makes it economically practicable. Produced by Economic Water Softeners Ltd., the system has been approved by the Ministries of Health and Works and is an integral part of the B.I.S.F. prefabricated house. Here then is a case where technical progress and new needs have conjoined to effect a minor revolution.

For architects and the building industry the B.I.F. acts as a kind of indicator to the progress to be expected in the Building Exhibition. At the former one studies new processes and observes trends; at the latter one sees the objects which can be bought—or at least hopefully specified.

Building Science Abstracts : Readers are reminded of these Abstracts, which are summaries of various publications, and 'purport to be fair summaries of the original literature, but no responsibility can be accepted by the Building Research Station for the accuracy of the authors' statements or for their opinions'. The publications summarized are by foreign authors as well as English, and cover a wide range of subjects. The Abstracts cost 1*s.* 6*d.* each, and may be obtained from H.M. Stationery Office in London, Edinburgh, Manchester, Cardiff or Belfast.

Dufaylite. This is the name given by Messrs. Dufay-Chromex Ltd. to a material they have developed from experience gained in making aircraft radomes during the war. It is kraft paper impregnated with a phenolic resin, and is made into sheets of honeycomb pattern. The paper is specially selected for the length and direction of the fibres; this, with the impregnation, produces what is claimed to be the lightest and strongest interlaying material yet produced; indeed, a man can stand on a panel of Dufaylite without causing it to collapse. The material is used as a core, laminated



A panel in a flush plywood door, showing Dufaylite core

with plastic glue between two facing boards which can be plywood, metal, or other suitable skin, and the combination forms a panel having great strength in compression and very light weight. The material is made in four sizes of mesh; the Dwarf, only supplied for aircraft construction, and the A.B. and C. meshes. The C. mesh is the largest made, the cell width being about $\frac{3}{4}$ in. Densities and compression strengths are as follows:

Type	Mesh width	Density	Compression strength
	in.	oz. cu. ft.	lb. sq. in.
A	$\frac{3}{8}$	30	112
B	$\frac{9}{16}$	21	60
C	$\frac{3}{4}$	15	40

NOTE.—Compression strength doubles on lamination.

The material is adapted to making curved articles, as it can be bent to a radius as small as $\frac{1}{2}$ in. It is being used by aeroplane manufacturers, and other fields of industry are employing it as a basis for flush doors, partitions, furniture and fitments, where strength and light weight are needed. Dufaylite can be rendered fire-resisting by treating it with a special solution, and it is resistant to moisture and attack by insects and vermin, on account of its resin impregnation.

Tests are in progress on its sound-proof and thermal qualities, as the cells can be filled with lightweight insulating material, such as cork or vermiculite. Messrs. Dufay-Chromex do not supply finishes laminated, but only the honeycomb material for manufacturers to incorporate between plywood or other facing material. Detailed information can be obtained from the Company at 14/16 Cockspur Street, London, S.W.1.

The Royal Sanitary Institute. The Council of the Royal Sanitary Institute have announced that two prizes will be offered during 1947. The first, the John Edward Worth prize of £40, is for an essay on 'Practical improvement of appliances or inventions for dwelling houses'; the second, the John S. Owens prize of £25 for an essay either on 'Atmospheric pollution', or 'The ventilation of buildings and its effect upon human health'. The general conditions of the competitions can be obtained from the Secretary of the Royal Sanitary Institute, 90 Buckingham Palace Road, S.W.1. Essays must be sent in on or before the last day of this year.

It will be interesting to see if any of the competitors include in their suggestions a means of showing, definitely and conclusively, whether a lavatory basin tap is right or left hand threaded. An arrow, with the word 'unscrew', would be so helpful to the amateur washer-changer. Another idea is a hinged cap, closed by a lever action, on the clearing eye at the bottom of a lead trap under a sink, instead of the present screw action. Undoing an obstinate cap has probably resulted in damaging more lead waste pipes than plumbers would care to disclose.

British Standard Specifications: Drawing papers, B.S. 1340-43 : 1946. B.S. 1340 deals with prepared tracing paper, 1341 with natural tracing paper; 1342 with detail drawing paper, and 1343 with cartridge drawing paper. The standard widths common to all are 30 in., 40 in., and 60 in., but an additional width of 72 in. is given for cartridge. The standard lengths of rolls of prepared tracing paper are 20 yd., and 50 yd.: those of the three other standards being 25 yd. and 50 yd., with a tolerance of plus or minus $\frac{3}{16}$ in. per 30 in. of width in the case of natural tracing paper, and $\frac{1}{8}$ in. for the others. Each roll must be marked with the name and description of the material, the length, width, substance and surface, except that the width apparently need not be stated for detail drawing paper.

Architects, Engineers and Surveyors' boxwood scales; B.S. 1347 : 1947. This B.S. sets out the various scales that have been approved by the Mechanical Industry Committee, consisting of representatives from an impressive list of 35 Government departments, scientific and industrial organizations. The specification covers scales made of boxwood, or of boxwood with opaque celluloid edges, and in the Foreword attention is directed to the increased length of scales now adopted, so that the $\frac{1}{8}$ in., $\frac{1}{4}$ in., and $\frac{1}{2}$ in. shall read to 100 ft., 50 ft., and 25 ft. instead of 96 ft., 48 ft., and 24 ft., as formerly was usual, the reason being that it is considered easier to set out long lengths in sections of 100 ft. or 50 ft. rather than in 96 ft. or 48 ft. In the open divided scale the 0 is the second main division, but in the fully divided ones it is the first. Opinions may vary as to which is the more convenient marking, but probably an opinion on the point is only preference due to being accustomed to one or the other.

Coloured Pitch Mastic Flooring. B.S. 1375/1947: The restrictions on the use of timber for flooring give additional importance to substitutes, and for ground floors pitch mastic deserves consideration. The Foreword to the B.S. explains that coloured pitch mastic has been developed as a result of considerable experience gained in the laying of black pitch mastic (B.S. 1093) during the war, and is designed to provide a flooring having a decorative appearance in appropriate situations, such as kitchens, but the specification does not cover flooring required to withstand abnormally high temperatures, or chemicals and industrial liquors. It is pointed out that pitch mastic alone cannot properly be described as 'asphalt', as it does not contain asphaltic bitumen. This flooring is apt to give off objectionable fumes during laying, and the specification gives a warning against overheating or unduly prolonged heating, to avoid this result. Suitable thicknesses are $\frac{5}{8}$ in. or $\frac{3}{4}$ in. for light traffic such as offices, domestic floors, and light stores, and 1 in. or over for heavy factories, loading docks, garages and so on. Hints are given on the treatment of the foundation surface and the method of laying. The colours comprised in the specification are red and brown.

All the above B.Ss. may be obtained from the British Standards Institution price 2*s.* net, post free.

Nomenclature of Commercial Timber; B.Ss. 589 and 881/46: These two specifications have now been issued as one publication, though retaining their separate B.S. numbers. They tread on the delicate ground of the difference between hardwoods and softwoods, and prepare themselves for criticism by saying 'It should be clearly understood that the sub-division of commercial timbers into these two grades of hardwoods and softwoods follows the definition of these terms as given in B.S. 565, based on a long-standing custom of the trade. They refer to the botanical group to which the timber belongs and do *not* refer to the physical properties'. The standard timbers listed are intended to cover all hardwoods and softwoods of economic importance in Great Britain. The principle of endeavouring to establish a single standard name for each timber and restricting that name to one timber only has in general been maintained. Information is given about the botanical species of each timber, sources of supply, and other commercial or botanical names by which the timber may have been known, and there is an index for the standard and botanical names, to enable any timber to be readily traced.

Ministry of Health Pamphlet No. 5. Fuel Saving Fires for New Houses. Better designed and more economical fires, stoves and cookers are to be installed in new houses as a result of research into appliances which burn solid fuel. Some are already being produced on a large scale. The Minister of Health, Mr. Aneurin Bevan, has sent housing authorities a list of post-war types which have been approved by the Department of Scientific and Industrial Research and by the Fuel Engineers of the Ministry of Fuel and Power, so that authorities can consider them for their new houses. More appliances are being tested, and additions will be made to the list, which includes open fires (with or without back boilers), continuous-burning open fires with back boilers, openable stoves and continuous-burning cookers. Arrangements are being made, where necessary, by production agreements between the Government and the manufacturers, to ensure immediate production. Manufacturers have given assurances that the appliances will be made in greatly increasing numbers during this year The Minister's letter points out, however, that the demand can be met during the next few months only if each local authority's requirements are widely spread over the different types of approved appliance, and authorities are asked to find out the supply position before specifying particular types, while at the same time being prepared to use approved alternatives if deliveries cannot be assured. Authorities and their contractors are also asked to assure efficient distribution by asking for deliveries when they actually require them, and placing early orders for long-term requirement.

The Government has been considering improved solid fuel appliances since the Simon Report on Domestic Fuel Policy was made to the Minister of Fuel and Power. The report made recommendations on higher heating efficiency and insulation in the home. The Ministry of Fuel and Power is shortly to open permanent exhibitions of recommended solid fuel appliances in London and Glasgow. In the meantime the Minister of Health has notified local authorities that the appliances can be seen at the showroom of the Women's Advisory Committee on Solid Fuel, 18, South Molton Street, London, W.1. The following are the types of approved appliances which have been recommended to local authorities:

Openable stoves (inset type) with back boilers.
Continuous-burning open fires with back boilers (with or without convection).
Improved open fires with back boilers (with or without convection).
Improved open fires without back boilers.
Cookers: continuous-burning, with boilers:
(*a*) semi-insulated — continuous - burning freestanding, with boilers.
(*b*) combination grate—continuous-burning, with boiler.
(*c*) back-to-grate — continuous - burning, with boiler.

Random Definitions:
Lead:
Silver-copper-lead pipe.—A lead alloy pipe in which lead of known purity is combined with not more than 0.005% silver and 0.005% copper.
B.H.A.S. Lead.—A high-quality virgin lead produced by Broken Hill Associated Smelters of Australia.
Creep resistance.—The resistance to extension under steady loads, such as are produced by prolonged internal pressure in pipes.

Practice Notes

Edited by Charles Woodward [*A*]

IN PARLIAMENT. Removal of Erections (Licensing). Asked if he would revise the regulation which requires that the value of the materials in a small building, such as a garden shed, which it is proposed to move from one site to another, must be included in the total cost, which has the effect of bringing the operation within the scope of licensing by the local authority, the Minister of Works replied: No revision is necessary. If it is desired to move an existing building from one site to another all that has to be taken into account in computing the cost of the work is the cost of dismantling, the cost of transport, if any, and the cost of re-erection. Asked further whether that also applied to the sale of new garages in concrete, steel, aluminium, and timber, which are being extensively advertised, the Minister replied: This does not apply to new erections, but to existing ones. (21 April 1947.)

National Service (Architectural Students). Asked whether, in view of the length of the architectural course, he will arrange for all students who will have completed two years' national service by August 1947, to be released in time to start, or resume, the architectural year which begins in September 1947, the Minister of Labour replied: No, Sir. Any such arrangement would endanger the age and service scheme, because a great many other men could claim similar treatment. The architectural course is no longer than certain other courses. (22 April 1947.)

Air-Raid Shelters. Asked what powers he has to compel householders to retain Anderson shelters which they do not want; what action he is taking to hasten the collection of such shelters; and by what date he estimates that this will be completed, the Secretary of State for the Home Department replied: Under Section 28 of the Civil Defence Act, 1939, it is an offence to remove shelter materials provided free of charge from the premises for which they were provided without the consent of the local authority. Local authorities have recently been reminded of the urgency of the need to collect shelters which householders have not exercised their option to purchase, but as progress depends upon the availability of labour and transport I am unable to estimate when the collection will be completed. (24 April 1947.)

Standard Specifications. Asked to what extent the recommendations of the British Standards Institution are being followed by local authorities when obtaining components for the housing programme, the Minister of Health replied: The use of the standard specifications covering a wide range of products is obligatory in all housing work undertaken by local authorities, and approval of schemes is conditional upon compliance with these specifications. (28 April 1947.)

Terrace Houses, Regent's Park. Asked how long he will take to repair the Nash houses in Regent's Park, the Minister of Works replied: The work of repairing and adapting some 200 Nash houses in Regent's Park for temporary use as Government offices will, I hope, be completed before the end of the year. In addition, a certain amount of repair work is being done for the Office of Crown Lands in respect of 186 houses occupied by private tenants, but I cannot yet say how long this work will take. Asked further when the 200 houses are repaired, how long will it take to free them from the 5,000 civil servants, or how long the necessity arises for their work to go on, the Minister replied: That all depends on how soon other accommodation can be provided for the 5,000 civil servants, or how long the necessity arises for their work to go on. Asked further whether the conversion to Government offices which has been undertaken is such as to make it quite easy for these houses to be available for private residences when the Government no longer need them, the Minister replied: I would not say that it would make it 'quite easy', but it would add no difficulty whatever to the conversion which would be necessary. (28 April 1947.)

Soane Museum. Asked whether he was aware that the Soane Museum is inaccessible to the public owing to the inadequacy of the original endowment; and whether he will make a grant to the trustees in order that the public may be able to study and enjoy the works of art contained in it, the Chancellor of the Exchequer replied: Yes, Sir. It is proposed to present a supplementary estimate inviting the House to vote a grant in aid of £2,250 towards the expenses of the museum, in order to enable the museum to be opened to the public on 240 days in the year. (29 April 1947.)

Building Contracts. Asked in what respects the contract that he now requires local authorities to make with contractors so as to have their building work completed in time to meet the Government's plan to raise the school-leaving age differs from a cost plus contract, the Minister of Education replied: Two alternative types of contract are proposed; authorities are not required to adopt either. The first is based on a schedule of prices; the second is a fixed fee contract. The difference between these two and a cost plus contract is explained on pages 13 and 14 of the Report of the Central Council for Works and Buildings on the Placing and Management of Building Contracts published by His Majesty's Stationary Office in 1944. (29 April 1947.)

MINISTRY OF HEALTH CIRCULARS. A supplement to Circular 76/46 points out that under the Control of Iron and Steel (No. 55) Order, the quantity of electrical conduit tubing which could be purchased without an 'M' form was reduced from 2 tons to 5 cwt. This has caused some difficulty, and local authorities are therefore asked to issue 'M' forms in future for all purchases of conduit for housing work, whether over or under 5 cwt., provided it is necessary for the particular project. Where practicable, separate 'M' forms should be issued, endorsed with the purpose for which the material is required.

Circular 70/47 refers to the interim use of housing sites for food production. Local authorities are urged to take all possible steps to ensure that land acquired for housing which is not to be developed during the present growing season should remain in agricultural use, or if agricultural use has ceased, that the previous occupier or anyone else should be invited to cultivate it until it is required for development. County War Agricultural Executive Committees will continue to give any help required.

Circular 71/47 deals with the use of steel recovered from Air-Raid Shelters and the extent to which the material should be made available for housing purposes, in lieu of timber and new steel. Local authorities responsible for the collection of shelter material may retain such quantities of the steel components as they are in a position to ear-mark at once as being required for their housing schemes. Schedule A, attached to the Circular, gives the size and length of the available steel, and Schedule B describes the work in which it can be used. This includes fencing, lintels, floor joists, flat roofs to out-houses, purlins to steel roof trusses and ceiling joists.

Circular 79/47 refers to floor coverings for Solid Ground Floors in new houses and a schedule of alternative materials is attached. Softwood board, wood blocks and hardwood strip may be used over concrete ground floors provided that the timber can be saved out of the maximum quantities of softwood and hardwood at present allowable per house. Building licences for new houses restricting the use of timber on ground floors (Circular 201/46) should therefore be modified so as to preclude the use of timber joists only. Until further notice black pitch mastic should not be specified for floors owing to the danger from fumes, the mastic referred to being that covered by B.S.1093 : 44.

Circular 80/47 refers to the Housing (Declaration of Unfitness) Regulations, 1947, made by the Minister of Health under section 176 of the Housing Act, 1936. (S.R. and O. 1947, No. 617. Housing, England.) The effect of an unfitness Order, made and confirmed under the Regulations, is to reduce the amount of compensation payable where a house is compulsorily purchased under Part 1 of the Town and Country Planning Act, 1944, if the compulsory purchase Order is made either before or within two years after the confirmation of the unfitness Order. The compensation payable would then be on the basis applicable to a house in a clearance area under the Housing Act, 1936. An

unfitness Order is not applicable where the unfitness is due wholly or substantially to war damage.

BUILDING LICENCES. Architect's liability. The Practice Committee have obtained Counsel's opinion as to the liability of an architect in cases where the cost of the work has exceeded the amount authorized by a building licence. Counsel's opinion is as follows:—

IN THE MATTER OF REGULATION 56A DEFENCE (GENERAL) REGULATIONS 1939. I am asked to advise whether, in any of the three cases set out in this Case to Advise, an architect supervising work commits an offence under the Defence (General) Regulations, 1939. Regulation 56A makes it unlawful to carry out building operations, with certain exceptions which are, for the present purpose, immaterial, unless the work is authorized or licensed by the Minister of Works. The penalty paragraph of the regulation, paragraph 6, provides that in every case where the work is supervised by an architect, such architect shall be guilty of an offence if the work is carried out in contravention of the Regulation.

Prima facie, therefore, an architect commits an offence under the Regulation if he supervises work where a licence to do work up to a certain sum has been granted by the Minister and work is done in excess of the amount of the licence, but there is a proviso to paragraph 6 of the Regulation which makes it a defence to a charge brought for doing work in excess of the licence, for the person charged to prove that at the time when the work in respect of which he is charged was begun or carried out, he had reasonable grounds for believing that the cost would not exceed the amount of the licence.

CASE I. An architect has obtained a firm fixed tender from a builder, and following thereon a building licence for the amount of that tender. In carrying out the work the builder's costs exceed the amount of the original tender and licence, although no variation in the work has taken place. In such a case, the extra builder's costs must be borne by the builder and not by the building owner.

I am of opinion that the architect has committed no offence under Regulation 56A of the Defence (General) Regulations if the tender which was made by the builder and accepted by the building owner was a tender which a skilful architect could properly advise a client to accept. The architect would be protected by the proviso. If a builder makes a tender to do the work for what appears to be a proper sum and binds himself to do it for that sum, the architect has reasonabe grounds for belief that the work can be done for the amount of the tender. Indeed, as far as the architect and the building owner are concerned the cost of the work would not exceed the amount of the licence because the builder would be entitled to receive for the work no more than the sum for which he had contracted to do it which, in the case suggested, is the amount of the licence.

CASE II. An architect agrees a schedule of prices, upon which the work is to be measured and obtains a building licence for an amount based on the schedule of prices. In carrying out the work the builder's costs exceed the cost of the work measured and valued on the schedule of prices, no variation in the work having taken place.

I am of opinion that the architect in these circumstances might be found guilty of an offence. It would be a question of fact for the court trying the issue to determine whether the architect, when the work was started or was carried out, had reasonable grounds for believing that the cost of the work would not exceed the amount of the licence. Before the work was started or the licence obtained the architect should know exactly what work he was calling upon the builder to do under his contract. Knowing the amount of the work to be done he should with reasonable diligence and skilful measurement be able to say by reference to the schedule of prices what such work would cost. If there was a big difference between the amount of the licence and the cost on the final measurement the court might well hold that the architect had not skilfully informed himself as to the cost before starting the work and therefore did not come within the proviso. An architect is not likely to run much risk if there is a small excess over the licence figure, but he would be in real danger if there was a large one. The case put to me is when there is no variation in the work. This sort of problem is more likely to arise where by reason of some unexpected happening during the progress of the work something more than is contemplated at the commencement of the work has to be done. In such a case the architect would probably be protected by the proviso.

CASE III. An architect obtains a building licence for a specified sum and the builder carries out the work on a prime cost plus profit basis, and the cost of the work on that basis exceeds the amount of the licence, no variation in the work having taken place. In such a case the builder would no doubt claim to be reimbursed his extra costs.

I am of opinion that in this case the architect might be held to have committed an offence against the Regulation 56A. Again it is a question of fact for the court to say whether it is satisfied that the architect had reasonable grounds for believing that the work could be done for the amount of the licence. The burden of proof would be on the architect to so satisfy the court. In the circumstances of this case it would be much more difficult for the architect to establish a defence under the proviso. To establish such a defence he must show that before the work was started he could, with reasonable accuracy, forecast what the work would cost on a prime cost plus profit basis. If the work carried out on that basis cost very much more than the sum he forecast the result would show that he was not able to make a forecast with accuracy. If, in such a case, the architect could show that the extra cost had been caused by something which could not have been foreseen when the work was started, e.g. some jump in the cost of materials or labour or undue delay caused by exceptional circumstances outside the control of the parties, it would afford him a defence. The only safe thing for an architect to do in a contract of this sort is to stop the work when he finds that the amount of the licence has been expended.

(Signed) H. G. GARLAND

WAR DAMAGE REPAIRS. Professional Fees—Employment of Consulting Engineer. The War Damage Commission announces the following addition to the revised Code of Professional Fees published on 8 February 1946.

Where an architect is employed in an advisory or supervisory capacity in connexion with the execution of the works and, in agreement with his client, retains the services of a consulting engineer the Commission will allow in addition to the appropriate fees to the architect, fees in respect of the services of the consultant in the following cases: (*a*) Where it is shown that a consultant was employed when the damaged building was first constructed; (*b*) where steel-work or reinforced concrete frames or extensive heating, ventilating or mechanical installations have been damaged; (*c*) any other case where the Commission's prior agreement is obtained to the retention of the services of a consultant.

Scale of Fees

(1) For drawing up a report for the architect, for making, when necessary, detailed survey of the premises or of the engineering services if no drawings are available, or checking the drawings if available:

Principal's time	..	£7	7	0 a day
Senior Assistant's time		£3	13	6 „
Junior Assistant's time		£2	12	6 „

Note.—Senior assistants to mean assistants receiving £8 8*s*. a week and upwards; junior assistants, those receiving up to £8 8*s*. a week.

(2) For (general) consultation with the architect; for preparing the necessary plans, designs, specifications and drawings; for obtaining and advising the architect on tenders; and for supervision of the execution of the engineering works:

10 per cent on works costing up to £500 with a minimum fee of £10 10*s*.
9 per cent on works costing between £500 and £1,000 with a minimum fee of £50.
8 per cent on works costing between £1,000 and £1,500 with a minimum fee of £90.
7 per cent on works costing between £1,500 and £2,000 with a minimum fee of £120.
6 per cent on works costing over £2,000 with a minimum fee of £140.

(3) The above fees are exclusive of travelling expenses and other reasonable disbursements and the fees under (1) are in addition to those under (2).

(4) The above fees are exclusive of the wages of a clerk of works which will be recoverable from the War Damage Com-

mission provided that the employment of a clerk of works is reasonable.

(5) The above fees are exclusive of those for the preparation of bills of quantities for which fees will be allowed in addition on the normal professional scale.

(6) The fees to the architect if payable under 2 (*a*) of the Revised Code shall be reduced by an amount not exceeding 2 per cent on the cost of the work upon which the services of the consultant are retained, or 1 per cent on the cost of the whole scheme, whichever is the less.

It should be noted that this scale is not applicable to cases where owing to the special nature of the work the accepted practice would be for the work to be carried out under the direct supervision of an engineer, but extends only to cases where the architect remains generally responsible to his client for the whole of the work, instructs the consultant and provides him with the necessary drawings, incorporates the consultant's requirements within the plans and specification, orders the sub-contract work through the main contractors and deals with interim certificates and final accounts of such sub-contracts, and gives general supervision to the work covered by the consultant to ensure that it is co-ordinated with the other general building work.

MINISTRY OF TOWN AND COUNTRY PLANNING. The Report of the Central Advisory Committee on Estate Development and Management in War-Damaged Areas has now been issued and is obtainable at H.M. Stationary Office, price 1*s.* net.

LAW CASE. Chesterton R.D.C. v. Ralph Thompson Ltd. Public Health Act, 1936, Section 37 (1). This Section provides: 'Where plans of a building . . . are . . . deposited with a local authority, the authority shall reject the plans unless . . . the plans show that satisfactory provision will be made for the drainage of the building.' The words 'drainage of the building' in the sub-section refer to the drains of the individual building or buildings the plans of which are deposited, and not to the system of drainage for that building or buildings and other buildings. Consequently, if the plans of a building show that satisfactory provision will be made for the drainage of that particular building, the local authority are not entitled to reject them on the ground that the sewer designed to take that drainage leads to an inefficient septic tank with the result that a nuisance may be caused by the failure of the tank adequately to deal with the sewage. (1947. 1 All E.R. 273.)

LAW CASE. Croydon Corporation v. Thomas. Public Health Act, 1936. Section 75. The owner of a building may appeal against a requirement of a local authority that he shall provide a dustbin under Section 75 of the Public Health Act, 1936, on the ground that the burden of providing a dustbin should be thrown on the tenant and not on the owner, and the justices have an unrestricted discretion in dealing with such an appeal. (1947. 1 All E.R. 239.)

WAR DAMAGE COMMISSION. Cost-of-Works Payment for War Damage. In the issue of the JOURNAL for 13 January last, in Practice Notes, the case of Brigadier D. A. S. Browne v. War Damage Commission was reported, the Judge holding that the Commission should bear the whole cost of reinstating four houses in Jamaica Street, Stepney. The Commission appealed and the Court of Appeal delivered judgement on 25 April last dismissing the appeal. Leave was given to the Commission to appeal to the House of Lords on the understanding that they would pay the costs of the appeal in any event. The Court of Appeal agreed with Mr. Justice Vaisey's finding that rebuilding of the walls of the houses was the direct result of the explosion, and that the explosion of the bomb was the proximate cause of the damage and not merely a contributory cause. The Court wished to keep open the question whether, in some other case, the facts might, or might not, justify an apportionment of the cost of reinstatement.

Correspondence

R.I.B.A. GOLFING SOCIETY

Sir,—It is intended to revive the meetings of the above society and an opening match has been arranged against the London Master Builders' Association Golfing Society at West Hill Golf Course on Wednesday 9 July. Will all members who wish to play in this match please write to Mr. H. St. John Harrison [*F*] at 1 Babmaes Street, Jermyn Street, London, S.W.1 (Whitehall 0295), stating their lowest club handicap.

After this match a meeting will be held to discuss the society's plans for further meetings.

Holders of trophies are recorded as follows: The Allensby Bowl (Henry Tanner), The Captain's Cup (H. St. J. Harrison), The Selby Cup (John Grey), The Sullivan Trophy (the late Gerald Unsworth—trophy in keeping of R. B. Selby). Yours faithfully,

H. ST. J. HARRISON [*F*]

ORIENTATION OF CLASSROOMS

Sir,—It seems from the most recent authoritative utterances that opinions are still divided as to the most desirable aspect for school classrooms, so that there would appear to be room for further comment.

Evidently the most favoured S.E. aspect derives from the fact that with that orientation no sunlight can possibly fall upon the blackboard after 9 o'clock G.M.T., although the rest of the room is bathed in it to a diminishing degree until 3 o'clock—in fact the most of the school working day.

It is the rule in drawing offices to cut off direct sunlight from paper work, and unless there be a paper-saving drive and a return to the slate the same rule should apply to schools ; but in any case sunlight on a board black and far should be less injurious than that on paper white and near.

The B.S.S. draft for school daylighting very diffidently recommended sunlight at the day's end. With a N.W. aspect this would strike the blackboard and increase in scope from 3 o'clock onwards, after which time it should not be difficult to arrange the pursuit of crafts that need no paper, but with tired minds needing a cheerful stimulant. Yours faithfully,

H. D. C. COOPER [*A*]

ANTI FROST PLUMBING

Sir,—May I very briefly comment on Mr. Parke's notes on my letter published in the March issue of the JOURNAL?

1. As there appears to be 80 ft of pipes to empty, would there not be more than four pints to soak away?

6. Bearing in mind the saving of pipes and accessibility it is worth while to provide a low down w.c. suite. Surely a heated towel rail is indispensable whatever else is sacrificed, if the h.w. pipe is looped it would suffice.

7. The drawing does not show the casings; these should be avoided as much as possible.

Might I suggest, for the benefit of students, that Mr. Minty gives readers the detached benefit of his views and inquiries at the Metropolitan Water Board.

In many districts Water Boards insist on all cold supplies, except over the sink, being taken from the cold water cistern, thus providing an emergency supply when the main service is cut off for main or other repairs.

Yours truly, A. FOSTER [*F*]

We forwarded Mr. Foster's letter to Mr. C. Bertram Parkes who replied as follows.—

1. The length of pipe to be emptied by the external cock is only 50 ft. containing about 3½ pints of water.

6. I agree that a good low down syphonic w.c. suite would be worth while, but it would be too expensive for State-aided housing. A heated towel rail served by a secondary circulation is desirable but, at present, expense nearly always rules it out.

7. The casings were omitted from the drawings for reasons of clarity.

I agree with Mr. Foster that it would be very helpful if Mr. Minty would kindly publish a design for an installation conforming to the requirements of the Metropolitan Water Board. The Bournville scheme was an experiment and not a final solution of the problem. The study of other schemes may lead to useful modifications.

AEDICULES

Sir,—My inability to be present at the meeting on 10 December 1946 was conditioned by the fact that I was somewhere in the air between India and England. When the paper was published in the JOURNAL I was again abroad, but now that

Fig. 1. Buddha in niche on stupa at Taxila

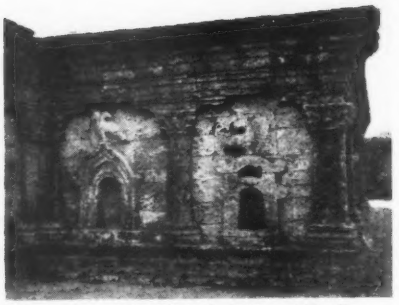


Fig. 2. Græco-Buddhist building at Taxila

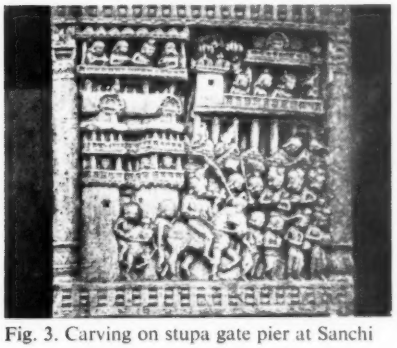


Fig. 3. Carving on stupa gate pier at Sanchi

Fig. 4. Island palace at Udaipur

I have had the privilege of studying it, I hope it may not be too late to offer a small contribution to Mr. Summerson's fascinating thesis.

If we are to find the origin of the Gothic ædicular system, we must, I think, turn our attention to the East.

Taxila, in the north-western Punjab, was a centre of Brahmanical and Buddhist culture from the earliest times. Here, on the miniature stupas, are to be seen what are probably some of the earliest ædicules, enshrining figurines of the seated Buddha. The 'little houses' are of two principal types, both designed to accommodate the human form in the oriental meditative pose. The one has parallel sides, is semi-circular above the head and widens out at the bottom to take the knees. The other is 'trabeated', with a 'lintel' above the head supported by sloping sides. Although executed in stone, the scale is minute. Each ædicule has supporting figures. They are cut out of the solid; there is nothing whatever structural about them, as can be seen from the detail photograph (No. 1), which I took at a distance of a few inches with the aid of a proxar lens. Travelling a short distance in time and space to the ancient temples of Kashmir, we see at Martand how these two types of Buddhist ædicules merged and became the prototype of the Gothic trefoil 'arch', with gabled canopy. The ædicules range along the *inside* of the perimeter wall, presenting a blank exterior to the vulgar world.

The link with Greece is positive. Alexander of Macedon reached Taxila in 326 B.C. In a Græco-Buddhist building (No. 2) one finds widely spaced coarse 'Corinthian' attached columns and pilasters, with Indian cantilevers carrying the entablature. Between each pair of columns is a niche; one has a pointed arch complete with weather mould, the other is a gateway of the Sanchi type (*circa* A.D. 50). Each is crowned by a double-headed bird of prey. The difference in scale between the bird and the ædicule is most striking.

It is interesting to compare the 'little houses' on the city walls portrayed in the Sanchi carving (No. 3) with the palaces of Amber and Udaipur (No. 4) of a much later date. The small-scale window and balcony under some form of chhatri or umbrella (parasol as opposed to parapluie) is an invariable feature. The chhatri is the symbol of authority, whether a simple disc supported by a single upright, appearing like a chimney sweep's brush over the Sanchi stupas as a pyramidal roof on four columns or as the parasol held over the head of a maharajah. He has placed himself in a sheltered setting, just as a child does when he squats under a table, and he has his attendants supporting him as does Buddha in his niche in Taxila.

In the early mosques at the Kutb Minar, Delhi, and at Ajmer, which date from the end of the 12th century, we find the first large scale pointed 'arches', built by Hindu masons, and the beginning of cusping.

It should be noted that in none of these instances has the arch been used structurally. In every case, the trefoil or pointed opening has been achieved by means of cantilevers, with shaped ends, and not by voussoirs, with a keystone. The ædicule is, as Mr. Summerson has said, a fantasy and out of it the pointed arch accidentally grew.

The whole matter of ædicular architecture and the æsthetic or psychological as distinct from the structural derivation of Gothic forms is a fascinating study. Mr. Summerson is greatly to be thanked for having drawn our attention to the whole subject by his most interesting and informative paper. Yours faithfully,

W. W. WOOD [*F*]

HOUSE OUT OF FACTORY

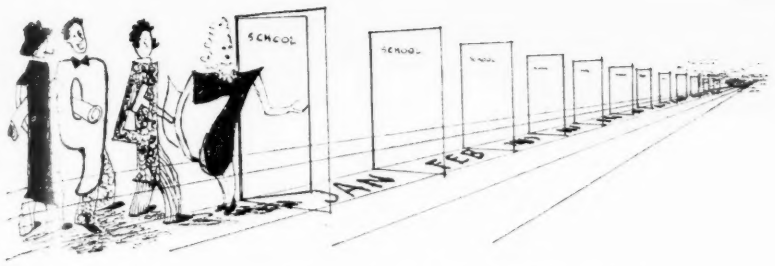
Sir,—Miss J. M. Albery and Mr. D. Dex Harrison in reviewing our book, *House Out of Factory*, on page 339 of your April number, state that we have copied 'cold word for word, or very thinly precised' long passages from a report entitled 'A Survey of Prefabrications', of which they were part authors. This report was mentioned in Chapter Ten of our book, after a list of British and American technical journals which had published detailed information about prefabricated building methods. We read the report, just as we read and studied all the available data we could obtain; and because it was a comprehensive report, obviously our book covered some of the same ground. Much of our historical and technical data was collected personally in the United States (by Gloag in 1934 and by both of us in 1939); by correspondence and discussion with the makers and designers of various factory-made houses, and with the generous and continuous help of the editor and staff of the *Architectural Forum* of New York, whose exhaustive records of the whole subject were put at our disposal. Throughout our book, we have made attributions in footnotes to authorities we have quoted or used, and the statement that we have copied 'cold word for word' from anything is untrue.

An equally serious suggestion, made by your reviewers, is that our book is an attack on the architectural profession. This is disposed of by referring to page 81, where we say: 'If the architect directs the making of houses from mass-produced, prefabricated "engine" and "body" units we shall have design; if the speculative builder gets to work we may only have disguise'. We do consistently attack the jerry builder's shoddy interpretations of traditional building methods.

In attempting to sustain their suggestion, your reviewers quote the opening sentence of 'Advice to the Reader', out of its context, thus creating a wholly erroneous impression, and state that the last sentence of that preface reads as follows: 'Homes made in the factory are not the product of *architecture* but of *industrial* design.' This is not the last sentence . . . it is followed by two others . . . nor is it quoted correctly. What we said is this: 'Homes, made in the factory, are the product not of *architectural* but of *industrial* design.'

What our book as a whole implies is that the architect is the master designer, whether he is tackling a problem of architectural or industrial design, and that the factory-made house, coming into the latter category, is still his responsibility. Yours faithfully,

JOHN GLOAG [*Hon. A*]
G. GREY WORNUM [*F*]



Schools and Students

Pressure on space, plus cuts in the paper ration, caused this column to be omitted from the last JOURNAL, hence some of the matter now published is a little dated. However, in the June JOURNAL we hope to publish a full report of the Arch.S.A. Congress at Brighton, which appears to have been a great success.

University of Manchester School of Architecture

Few students crossed to Europe in the last vacation, but preparations are under way for visits to various parts of Europe in the summer. A number of students are joining the Arch.S.A. tour to Denmark and Sweden while two other small parties are contemplating visits to Italy and to the Romanesque monuments of Southern France. Other students are carrying out preliminary surveys of different parts of the country at home for the selection of suitable subjects for the measured work required during the summer. The following prizes of the Manchester Society of Architects have been awarded to students of the School: *Senior Measured Drawing Prizes:* First Prize (Bradshaw Gass Prize)—G. Bardsley; Special Prize by Mr. G. Sanville—J. A. Skovgaard. *Sketches Prize:* Special mention—D. Buckler. *Essay Prize* (President's Prize)—Miss J. Howard. *Senior Design Prize*: Second Prize—Miss D. M. Fletcher.

Arch.S.A. General Purposes Committee

On 17 February this committee was formed to take over the duties of the National Secretary, B. R. Davis, of Liverpool, who has unfortunately had to retire from this field of activity due to pressure of other work. The committee operates from the School of Architecture, Municipal School of Art, Manchester 10, under the chairmanship of Mr. K. C. Twist. Communications previously addressed to the National Secretary should now be sent to this committee.

The Welsh School of Architecture. For many years now, reciprocal visits have been taking place between the R.W.A., School of Architecture, Bristol, and the Welsh School of Architecture, Cardiff. These visits have always been very successful, and this year the Welsh School entertained students from Bristol. The main features of the visit were a lunch, a visit to the Civic Centre and a rugby match, which was followed by a visit to the School studios where some current work was exhibited. The proceedings were terminated by an informal 'smoker' in the evening.

R.I.B.A. Education Report

Leeds Centre approves by far the greater part of the R.I.B.A. Special Committee's recommendations on architectural education, which the students have examined under the Arch.S.A. 'Forum' scheme.

Points made were:

Pre-vocational education. Students should be advised after their first year whether to proceed with their training or not. The R.I.B.A. should provide a curriculum of subjects to be studied between School Certificate and entering a school of architecture. Direction of intending architectural students into a technical branch of the services was disapproved.

Curriculum. More office experience is desired. Office experience and academic training should be carried out in parallel. Experiment should not be forbidden after intermediate standard provided it is carried out on a sound practical basis.

Design. The recommendation in favour of increased attention to domestic work was particularly welcomed. The suggestion that students should be discouraged from attempting complex thesis schemes was not agreed with.

Presentation. Life drawing should be retained, but lectures on topography should be included in the curriculum.

History. History courses should be completed by Intermediate Standard.

Status. Academic status was felt to be less essential than a close association with the allied arts.

Other recommendations were fully approved and welcomed.

The almost vehement agreement expressed by the Plymouth Centre with the R.I.B.A. Report suggests that many of its recommendations have never been considered in Plymouth before. If this is so, it underlines the very great importance of the Report, perhaps not fully realized in those schools where the system described is already largely in force. A suggestion from Plymouth is: 'We think the R.I.B.A. could in some cases be a little more definite than "to forward recommendations to the Heads of the various schools".'

Such phrases as 'wholehearted agreement', and 'we cannot stress our agreement enough', indicate the mood with which the R.I.B.A. Report has been received in Plymouth. Some curious conditions are brought to light. It appears that His Majesty's Inspector will 'allow' not more than one outside visit (to work in progress) per term: that the students 'would like to see some full-size details done here': that they are 'just a little doubtful' as to the meaning of the term 'Theory of Architecture'. Disagreement is expressed on one or two points, such as the Special Committees' views on calculations (that they should be used to verify the soundness of structure, and not as an approach to it); and the recommendation that Recognition should not be granted to a school where the Head holds only a part-time appointment. But in general the Report is hailed with astonishment and delight.

In spite of difficulties and lack of encouragement the Manchester Municipal School has produced a statement on the student's examination of the R.I.B.A. Report. Approving the R.I.B.A. Committee's recommendations in almost every detail, the students' statement concludes with this penetrating comment: 'It is considered that most of the recommendations are not specific enough, and can be interpreted in too many ways'.

Both nails are here hit firmly on the head. First, that schools will be able to interpret the Report to suit the preconceived ideas of their staffs; second, that in general the recommendations made are only too obviously desirable. Nevertheless, Arch.S.A. would very much like to know in how many schools, particularly the smaller ones, they have in fact been adopted.

The New Towns Idea

Professor W. G. Holford, speaking on the 'New Towns Idea' at the Liverpool Centre on 28 February, drew a crowd which filled the seating in the school theatre and overflowed into the aisles.

Illustrating with many absorbing slides the history of the idea of a complete new town, Professor Holford went on to describe the situation as it exists today. He pointed out the progress which has been made in the gradually increasing consideration given to the architectural-sociological problem. He stated his conviction that the human race will not be content to exist for long on utility ideas and emphasized the difficulty of the architect's problem of giving the ordinary Englishman what he wants in the way of a house while avoiding architectural solecisms. Despite the Stevenage setback, Professor Holford's message, which he described as a murky afternoon which might be followed by a fine evening, Professor Holford was optimistic and his listeners went home with a clearer and happier view of the future of town planning and of new towns in particular.

Notes and Notices

NOTICES

Eleventh General Meeting, Tuesday 24 June 1947

The Eleventh General Meeting of the Session 1946–47 will be held on Tuesday 24 June 1947 at 6 p.m. for the following purposes:—

To read the minutes of the One Hundred and Ninth Annual General Meeting held on 5 May 1947; formally to admit members attending for the first time since their election.

To read the report of the Scrutineers appointed to examine the voting papers for the election of the Council for the Session 1947–48.

Light refreshments will be provided before the meeting.

Session 1946-47 Minutes IX

At the Ninth General Meeting of the Session 1946-47, held on Tuesday 15 April 1947, at 6 p.m.

Sir Lancelot Keay, K.B.E., President, in the Chair.

The meeting was attended by about 200 members and guests.

The Hon. Secretary announced that the minutes of the Eighth General Meeting, held on the 11 March, were being published in the JOURNAL, and they were taken as read and confirmed.

The President delivered an address, referring to the names of the Royal Gold Medallists to whom awards had been made since 1939, and called upon Sir Giles Gilbert Scott, O.M., R.A. (Past President), to speak on the work of Mr. W. Curtis Green, R.A. (Past Vice-President), the Royal Gold Medallist for 1942.

Sir Giles Gilbert Scott having spoken, the President then asked him and Sir Percy Thomas, O.B.E., D.L., J.P. (Past President), to escort Mr. Curtis Green to the platform.

Having been invested with the Medal, Mr. Curtis Green expressed his thanks for the honour conferred upon him.

The President then called upon Mr. E. Maxwell Fry [*F*] to speak on the work of Professor Sir Charles Reilly, O.B.E., Hon. LL.D., M.A., Hon. M.T.P.I. (Past Vice-President), the Royal Gold Medallist for 1943.

Mr. Maxwell Fry having spoken, the President then asked Sir Giles Gilbert Scott and Dr. Charles Holden (Past Vice-President) to escort Professor Sir Charles Reilly to the platform.

Having been invested with the Medal, Professor Sir Charles Reilly expressed his thanks for the honour conferred upon him.

The President then called upon Mr. H. Austen Hall [*F*] to speak on the work of Mr. Edward Maufe, A.R.A., M.A. (Past Vice-President), the Royal Gold Medallist for 1944.

Mr. Austen Hall having spoken, the President then asked Dr. Charles Holden and Sir Percy Thomas to escort Mr. Edward Maufe to the platform.

Having been invested with the Medal, Mr. Edward Maufe expressed his thanks for the honour conferred upon him.

The President then called upon Mr. J. H. Forshaw, M.C., M.A. [*F*], Chief Architect and Housing Consultant to the Ministry of Health, to speak on the work of Professor Sir Patrick Abercrombie, M.A., F.S.A. (Past Vice-President), the Royal Gold Medallist for 1946.

Mr. Forshaw having spoken, the President then asked Dr. Charles Holden and Sir Percy Thomas to escort Professor Sir Patrick Abercrombie to the platform.

Having been invested with the Medal, Professor Sir Patrick Abercrombie expressed his thanks for the honour conferred upon him.

The President then called upon Mr. Arthur J. Davis, R.A. [*F*], to speak on the work of Professor A. E. Richardson, R.A., M.A., F.S.A. (Past Vice-President), the Royal Gold Medallist for 1947.

Mr. Arthur J. Davis having spoken, the President then asked Sir Giles Gilbert Scott and Sir Percy Thomas to escort Professor A. E. Richardson to the platform.

Having been invested with the Medal, Professor A. E. Richardson expressed his thanks for the honour conferred upon him.

The proceedings closed at 7.55 p.m.

Session 1946–47 Minutes X

At the One Hundred and Ninth Annual General Meeting held on Monday 5 May 1947, at 6 p.m.

Sir Lancelot Keay, K.B.E., President, in the Chair.

The Meeting was attended by about 80 members and guests.

The Hon. Secretary announced that the Minutes of the Ninth General Meeting held on 15 April 1947 were being published in the JOURNAL, and they were taken as read, confirmed and signed as correct.

The following Honorary Members and Members attending for the first time since their election were formally admitted by the President :—

AS HONORARY ASSOCIATES:

Sir Ian MacAlister; Sir Geoffrey Whiskard.

AS FELLOWS:

F. T. Orman; Duncan Wylson.

AS ASSOCIATES:

T. W. Atkinson; R. W. W. Brown; A. L. Gabites; R. W. Mellor; L. S. Middleton; M. V. F. Poore; Mrs. Sheila Tribe; S. A. Whiteley.

AS LICENTIATES:

J. N. Calton; F. J. Eugene; Benjamin Lofthouse; T. H. Mayer; John Moorhouse; W. E. Parslow; A. C. Robinson; J. A. Stapleton.

The President formally presented and moved the adoption of the Report of the Council and Committees for the Official Year 1946–47. The Hon. Secretary seconded the motion, and a discussion ensued.

The motion having been put from the Chair, it was resolved that the Report of the Council and Committees for the Official Year 1946–47 be approved and adopted.

The President stated that the list of attendances at the Council Meetings during the Session had been laid on the table, and would be printed in the next issue of the JOURNAL and also be sent out to members with the Voting Paper.

On the motion of the President a vote of thanks was passed by acclamation to Mr. Ernest B. Glanfield [*F*] and Mr. John Summerson [*A*] for their services as Hon. Auditors for the past year.

Mr. John Summerson [*A*] and Mr. Cecil Burns [*F*] were nominated for election as Hon. Auditors for the ensuing year of office.

The proceedings closed at 6.40 p.m.

Royal Incorporation of Architects in Scotland ANNUAL CONVENTION 1947. The Annual Convention of the Royal Incorporation of Architects in Scotland will take place at Stirling on Friday and Saturday 20 and 21 June.

The Architects' Conference, Dublin, 1 to 14 June 1947

Final arrangements for all the events of the Conference are now being made. It is hoped that all members and students who have not already done so will at once refer to the programme sent to them with the last issue of the JOURNAL and will send in their application forms without delay indicating the events in which they wish to take part.

Disciplinary Action

Mr. Harry William Weedon of 129 Lordswood Road, Harborne, Birmingham, a Fellow, was reprimanded by decree of the Council dated 6 May 1947, made pursuant to the By-laws.

Mr. B. A. P. Winton Lewis

With reference to the note which appeared in the March issue of the JOURNAL, the Council at their meeting on 15 April accepted Mr. Lewis's resignation as from 19 February 1947.

R.I.B.A. Distinction in Town Planning

The award of the R.I.B.A. Distinction in Town Planning, with effect from 1 June 1947, will be by conferment instead of by examination and will be limited to Fellows, Associates and Licentiates of the R.I.B.A.

The Distinction is the highest award in Town and Country Planning that the R.I.B.A. can bestow. It is primarily for members of the R.I.B.A. who have made some contribution in the field of large scale planning, especially in visual and three-dimensional planning which is so vital in the development schemes that will take place throughout the country.

Recommendations will be submitted to the Council by a standing committee to be set up for the purpose. The title of the award and the affix denoting it will remain unchanged.

Personal applications by candidates will not be entertained: the name of a candidate must be submitted by three sponsors, themselves members of the R.I.B.A., who will be required to submit the following particulars on behalf of the candidate: (*a*) details of professional qualifications and experience; (*b*) evidence of his work and achievements in the field of town and country planning, including three-dimensional planning; such evidence to consist of a list of the candidate's work together with references to professional journals in which the works have been illustrated; and such other evidence as may assist the committee in making their recommendation to the Council.

No fee will be required from the candidate. Those members who have already been awarded the Distinction will retain it and any present candidates for the examination for the Distinction under the previous procedure will be dealt with by the panel of examiners under that procedure.

Associates and the Fellowship

Associates who are eligible and desirous of transferring to the Fellowship are reminded that if they wish to take advantage of the next available election they should send the necessary nomination forms to the Secretary, R.I.B.A., as soon as possible.

The Use of Titles by Members of the Royal Institute

In view of the passing of the Architects Registration Act 1938, members whose names are on the Statutory Register are advised to make use simply of the title 'Chartered Architect' after the R.I.B.A. affix. The description 'Registered Architect' is no longer necessary.

Correspondence with the Institute

In order to facilitate speedier attention to correspondence, and to relieve the staff of a great deal of research, it is particularly requested that members and students will kindly state in all correspondence with the Institute

the class of membership (F, A, L or Student) to which they belong.

Members Serving with the Forces

Killed

Bushell, P. E. [*A*], AC 2, R.A.F.

Decorations and Distinctions

Cook, P. E. [*S*], Capt., R.E. Mentioned in Despatches.

Larrington, C. T. [*A*], Major, R.E. Awarded Bronze Star Medal (U.S.A.).

Lynch, J. T. [*A*], Major, R.E. Awarded Decoration of the Cloud Banner (China).

Miller, E. J. [*S*], Capt., R.A. Awarded Military Cross.

Purcell, D. C. [*S*], Major, R.E. Awarded the Efficiency Medal (Territorial).

Routh, John [*S*], L/Cpl., R.E. Mentioned in Despatches.

Stevenson, F. R. [*A*], Capt., Intelligence Corps. Awarded Order of Knight of the Dannebrog (Denmark).

Taute, Matthys [*A*], Flying Officer, R.A.F. Awarded Military Cross.

ALLIED SOCIETIES

Eastern (Newport) Branch of the South Wales Institute of Architects' Annual Dance

The Annual Dance of the Newport Branch was held on 20 February 1947, at the King's Head Hotel, Newport. The Branch Chairman, Mr. W. Stephen Thomas [*A*] welcomed Alderman R. S. Tyack, J.P. (Mayor of Newport) and the Mayoress, Councillor D. Lewis (Deputy Mayor) and Mrs. Lewis, and Mr. Johnson Blackett [*F*] (President of the South Wales Institute of Architects). Arrangements for the function were made by Mr. J. Selby Davies [*A*] Chairman of the Dance Sub-Committee and his Committee, Messrs. D. B. Owen [*A*], R. V. Walker [*L*], and L. W. D. Wall [*A*], Hon. Sec. of the Eastern Branch.

It is gratifying to note that the total profit of 45 guineas from the function is being forwarded to the Architects' Benevolent Society and the sum of £50 was received from this branch as a result of last year's function.

South Wales Institute of Architects' Annual Dinner

The annual dinner of the South Wales Institute of Architects was held in Cardiff on 11 April. There was an excellent attendance and the guests included the President, R.I.B.A., Sir Lancelot Keay, K.B.E., Sir Percy Thomas, O.B.E., LL.D., Captain Geoffrey Crawshay, D.L., J.P., Chairman of the Welsh Board of Health, The Mayor and Mayoress of Newport, and Mr. C. D. Spragg (Secretary, R.I.B.A.). Mr. Johnson Blackett [*F*], president of the South Wales Institute of Architects, presided.

Proposing the toast of the R.I.B.A., Captain Crawshay stressed the urgent need for improving the standard of amenities in housing estates by careful planning and treatment of layout. To this end he recommended the more liberal use of grass lawns and trees of different species, together with the abolition of forecourt walls and fences. In his reply the President, Sir Lancelot Keay, said that under the present system of intensive controls and restrictions there was a danger that the architect might lose his individuality as an artist and that we should take great care to safeguard our heritage of free æsthetic expression against the insidious effects of controls and short-term policies. Further replies were given by Mr. C. D. Spragg and Mr. Johnson Blackett. Mr. Alexander Steele [*A*] proposed the toast of the guests and His Worship the Mayor of Newport responded.

For the first time in the history of the Institute, the dinner was followed by a dance which was much enjoyed, especially by the younger members.

Central (Cardiff) Branch of the South Wales Institute of Architects

A tea discussion was held in the City Hall Cardiff, on 16 April, and was attended by a very large number of students and practising architects. The subject chosen for discussion was 'Should we build to last?', valuable contributions to the debate being made by students as well as by older members of the Branch.

Essex, Cambridge and Hertfordshire Society of Architects—Hertfordshire Chapter

The Hertfordshire Chapter of the Essex, Cambridge and Hertfordshire Society held their Annual General Meeting on 17 April at the Red Lion Hotel, St. Albans.

Following an excellent dinner the Hon. Secretary presented the Annual Report of the Committee which showed that the Chapter in emerging from war to peace-time activities had passed through a successful year. Full meetings of the Chapter have been held at Hertford and Watford, and a great many other meetings and visits to places of interest had been arranged by local groups of members at St. Albans, Hertford and Welwyn Garden City. It was hoped that during the forthcoming year the activities of the Chapter would be further extended and the committee are keeping a watchful eye on all housing developments in the province in general and in particular on the New Towns at Stevenage and Hemel Hempstead.

Mr. John Howard Leech [*F*] was appointed Chairman for a second year and Mr. C. H. Aslin [*F*] accepted the office of Vice-Chairman. Other officers included Mr. G. W. Dixon as Hon. Treasurer, Mr. David A. Wilkie [*F*] as Hon. Secretary, Mr. F. Varney [*A*] as Hon. Auditor, and after a ballot, Messrs. Lutyens, Healing, Carter, Davies and Mauger were appointed as Committee.

In thanking the members for their continued confidence in him, the Chairman visualized a busy year ahead and reported that during the past year the Advisory Panel of members had attended every meeting of the Mid West Herts. Planning Committee and in most cases their recommendations had been accepted. He hoped that this would have the effect of improving planning and design of buildings in the province.

Members of the Chapter were entertained to lunch on 18 April by the Official Surveyors of the province when they met at Watford to visit the local housing exhibition in that town. The opportunity of thus informally meeting the various Council and County Surveyors was greatly appreciated by architect members who had formerly only had official contact with them.

Manchester Society of Architects' Annual Dinner

The Annual Dinner of the Manchester Society of Architects was held at the Grand Hotel, Manchester, on Wednesday 23 April 1947. The President of the Royal Institute, Sir Lancelot Keay, K.B.E., was present, and Mr. John S. Beaumont, M.C. [*F*], President of the Manchester Society, presided over a large attendance of members and guests. Mr. C. D. Spragg, (Secretary of the Institute), was also present.

The toast 'The Royal Institute of British Architects and its Allied Societies' was proposed by Mr. J. S. Beaumont. On behalf of his Society he extended a warm welcome to the Institute's President and mentioned that Sir Lancelot's speech at the R.I.B.A. Annual Dinner had received wide commendation in the Manchester area. Manchester's architecture had 'arisen' before the influence of the R.I.B.A. and its Allied Societies had been felt, and it was up to Mancunians as well as the city's architects to do their utmost to 'restore the ravages'. Mr. Beaumont pleaded for brighter cities and a speedy return to craftsmanship. He said that the Manchester Society had always pledged allegiance to the Institute and would continue to do so. He paid tribute to the courteous assistance and co-operation which had always been met with in the Society's dealings with the Institute's Secretary, Mr. Spragg.

The President, Sir Lancelot Keay, K.B.E., responded. He said he hoped the present 'wave of expediency and improvisation' would not take too great a hold. 'I am rather frightened', the President said, 'of those who declare that we should build for ten or fifteen years and then sweep it all away and start again'.

In proposing the toast of the guests, Mr. J. H. Worthington, O.B.E. [*F*] said he, too, was uneasy about the present 'shack age' and he hoped it would be of short duration. In responding to Mr. Worthington's toast, Alderman T. H. Adams, J.P., the Lord Mayor of Manchester, reminded those present that Manchester's legacy in the shape of city slums deserved short shrift, too.

Mr. H. T. Seward [*F*] is Hon. Secretary of the Manchester Society of Architects and was responsible for many of the administrative arrangements which helped make the function an outstanding success.

Berks., Bucks and Oxon Architectural Association Annual General Meeting

The Annual General Meeting of the Berks., Bucks and Oxon. Architectural Association was held on Saturday 12 April 1947, when about 100 members and friends attended a luncheon at Oxford and were entertained to tea by the Oxford Society.

Concluding his term of office, the retiring President, Mr. R. G. Brocklehurst [*F*] said that whilst many architects were now preparing plans and were engaged on work in connection with business enterprises and long-term industrial schemes, a large proportion of the best architectural talent was today being dissipated in copy-book designs from which there was little æsthetic satisfaction to be gained. Granted there must be official architects, and they had great work to do as designers and administrators. Housing was an acknowledged priority in building for some years to come, but Mr. Brocklehurst thought there was something wrong that should be put right. Local authorities with drive and energy were having their ideas pruned here and mulcted there by higher authorities who did not enter into the spirit so desirable in a nationally vital venture which depended to so great an extent upon architectural enterprise. He felt that a review of the situation was long overdue. Houses could and should be produced more quickly than at present. Perhaps complete area control for two or three years would solve the problem. By this he meant the vesting by the Ministry of Health of greater powers in local authorities. Upon the precept that houses should be built where easiest to build and to the simplest plans and with minimum of accommodation capable of easy extension later, it was undesirable to 'spray labour and materials all over the countryside in these days of still war-period effort', for example in the erection of new houses where gas, drainage and main water were not available and where the inhabitants worked in adjoining towns. This was not only wasted national effort but bad business.

Mr. Brocklehurst had something to say of the labour force itself. He thought that workmen had not yet found their feet following national service and work in war-time factories, and that their return to normal would take time. They would, however, he felt sure, as after the first World War, settle down to steady work and production would then go ahead.

A plea was made by the retiring President for the due recognition by all concerned of the value of our experienced town-planners. In this respect he hoped that the layouts as originated would be maintained in the face of any future opposition and parsimoniousness. Mr. Brocklehurst concluded: 'Let not our new projects and buildings be dressed and regimented like a company of soldiers, but with freedom of expression within neighbourly and manners limits'.

The newly elected President, Mr. H. F. Hurcombe [*F*], of the Oxford Society, said he accepted the position with due sense of the responsibilities it entailed. He drew attention to the way in which architects in their professional capacity were liable to be affected by the trend of legislation controlling the use of land, citing the Town and Country Planning Bill, 1947, and the New Towns Act, 1946. Under this legislation he hoped architects' services would be utilized to the full and that architects in private practice would play a worthy part in the development of the new towns that would be built.

BOARD OF ARCHITECTURAL EDUCATION

Board of Architectural Education: The Tite Prize Preliminary Competition
In the United Kingdom 279 competitors took part in the Preliminary Competition for the Tite Prize.

The following have been selected to take part in the Final Competition: Mr. Peter G. Beresford (Birmingham School of Architecture), Mr. William H. Davies (Welsh School of Architecture, The Technical College, Cardiff), Mr. W. W. M. Rhys Davies (Welsh School of Architecture, The Technical College, Cardiff), Mr. Richard De'Ath (Glasgow School of Architecture), Mr. John B. Dinsdale (Leeds School of Architecture), Mr. Richard C. Hosford (Nottingham School of Architecture), Mr. John M. Jenkins (Welsh School of Architecture, The Technical College, Cardiff), Mr. Kenneth J. King (Birmingham School of Architecture), Mr. John O. Knight (Nottingham School of Architecture), Mr. David J. Lloyd (Department of Architecture, The Northern Polytechnic, London), Mr. Alastair C. Mackintosh (School of Architecture, Edinburgh College of Art), Mr. Gilbert D. Menzies (School of Architecture, Edinburgh College of Art), Mr. Alastair M. Michie (School of Architecture, Edinburgh College of Art), Mr. Arthur H. Roper (Liverpool School of Architecture, University of Liverpool), Mr. Stanley P. Ross-Smith (School of Architecture, Edinburgh College of Art), Mr. Philip J. Scott (Department of Architecture, The Northern Polytechnic, London), Mr. James D. Shearer (School of Architecture, Edinburgh College of Art), Mr. Ian H. Smith (Department of Architecture, City of Oxford School of Art and Crafts), Mr. George C. Taylor (Nottingham School of Architecture).

R.I.B.A. Diploma in Town Planning
Mr. John Edward Deleuse [*A*], having passed the Qualifying Examination, has been awarded the R.I.B.A. Diploma in Town Planning.

COMPETITIONS

Proposed Technical College: Peterborough
Peterborough Joint Education Board invite architects of British nationality to submit in open competition designs for new buildings to be erected at Peterborough for a technical college.

Assessor: Mr. T. Cecil Howitt, D.S.O. [*F*].

Premiums: £500, £250 and £150.

Last day for submitting designs: 30 June 1947.

Conditions may be obtained on application to the Chief Education Officer, Education Offices, Peterborough.

Deposit: £2 2*s*.

Village Planning Competition
The Central Landowners' Association invites architects to submit, in competition, designs for the development of four villages.

Assessors: Prof. Sir Patrick Abercrombie, P.P.T.P.I. [*F*]; Mr. G. Langley-Taylor, M.T.P.I., F.S.I., F.L.A.S. [*F*]; Mr. Thomas Rayson, F.S.A. [*F*].

Premiums: £250, £200, £150 and consolation prize (or prizes) of £100.

Last day for submitting designs: 30 June 1947.

Conditions may be obtained on application to the Central Landowners' Association, 58 Victoria Street, S.W.1.

Deposit: one guinea.

Bessingby Housing Estate, Bridlington
Bessingby Town Council invite architects to submit designs for the layout of a Housing Estate at Bessingby and for 250 houses of eight types to be erected on part of the estate.

Assessor: Mr. C. W. C. Needham, F.S.A., M.T.P.I. [*F*].

Premiums: 100 gns., 50 gns., 25 gns.

Last day for submitting designs: 14 July 1947.

Conditions may be obtained on application to the Borough Engineer, Town Hall, Bridlington.

Deposit 2 gns.

COMPETITION RESULT

Colombo Cathedral Competition
1. Mr. R. A. P. Pinckney [*F*] and Mr. A. F. E. Gott [*L*].
2. Mr. F. X. Velarde, B.Arch [*F*].
3. Mr. J. B. Wride [*A*].

GENERAL NOTES

Course on School Decoration and Equipment—Correction
It was stated on page 343 of the April JOURNAL that the above course would be held at the Architectural Association from 2 July to 1 August inclusive. The dates should have read '21 July to 1 August inclusive.'

The next A.S.B. Lecture at the R.I.B.A.
Wednesday 4 June at 6 p.m. '*District Heating*', by Mr. J. R. Kell, A.M.I.Mech.E., M.I.H.V.E. M.Inst. [*F*].

Illustrated with lantern slides.

SYNOPSIS

(1) Brief historical reference.
(2) The technique of district heating today.
(3) Review of official publications.
(4) Economics of district heating and the present trend of municipal projects.
(5) Future possibilities.

The Acoustics Group
The newly-formed Acoustics Group of the Physical Society is holding a summer symposium at the R.I.B.A. on 26 June on sound absorption and reverberation. The discussions are to be opened by Professor P. V. Bruel of Copenhagen, who is speaking on 'Panel Absorbents', and Mr. J. Moir of this country will discuss some other new aspects of reverberation. Panel absorbents have been the subject of recent studies in several laboratories, and are of particular importance in auditorium acoustics. The meeting therefore has a direct interest for architects, who are invited to be present. The meetings will open in the morning, probably at 10 a.m., and continue in the afternoon and after tea. Any desiring tea are asked to let the secretaries know.

Architects are reminded that they are eligible for membership of the Group at a fee of 5*s*. per annum; there is no requirement that they have a direct interest in physics. Details may be obtained from the joint secretaries, W. A. Allen [*A*] and A. T. Pickles, O.B.E., at the Physical Society, 1 Lowther Gardens, Prince Consort Road, London, S.W.7.

London County Council: Qualifying Examination for District Surveyors
Preliminary notice is given by the London County Council that in the autumn of 1947 the Board appointed by the London County Council in accordance with section 77 of the London Building Acts (Amendment) Act, 1939, will conduct at the request of the Council an examination of persons desirous of obtaining a certificate of proficiency to perform the duties of district surveyor. The examination will be held in London, and it is the intention to hold subsequent examinations annually.

Possession of this certificate carries eligibility to compete for appointment to vacant positions as district surveyor at maximum salaries ranging from £1,200 to £1,800 a year (inclusive) or as assistant district surveyor at an inclusive salary scale of £840×£40—£960 a year.

Regulations governing candidature, and the syllabus for the examination will be available shortly and will be obtainable from the Architect to the Council, County Hall, Westminster Bridge, S.E.1, to whom requests for any further information should be addressed.

Edinburgh College of Art
The Board of Management may award in June this year three Scholarships of £225 for one year for a full time course in *Town and Country Planning* at the School of Architecture of the College for the session beginning on 1 October 1947. Candidates must be British subjects, under the age of 30 on 1 October 1947, and should possess a degree or diploma in architecture, civil engineering or surveying, and have had practical professional experience. The last date for receipt of applications is 10 June 1947. Further particulars may be obtained from the Registrar and Secretary, Edinburgh College of Art, Edinburgh 3.

School of Planning and Research for Regional Development
The fifth of the Three Months' Completion Courses in Town and Country Planning ended on 29 March 1947. The following candidates passed the course successfully, and are accordingly exempt from the final examination of the Town Planning Institute. Distinctions were obtained by A. B. Bunch [*A*], Coventry; W. N. B. George, B.Arch. (Liverpool) [*A*], Coventry; W. D. Woodall, P.A.S.I., Hunts. Other successful candidates in order of passing were: G. W. Seddon, B.Sc., A.M.I.C.E., Lancs; J. Bolton, M.Eng., A.M.I.C.E., A.M.I.Struct.E., London; R. A. Jensen [*A*], London; T. J. Widdaker, Dip.Arch.Leeds [*A*], Leeds; R. Blizzard, P.A.S.I., Southampton; W. J. Scott [*A*], Wilts; J. Botterill, P.A.S.I., A.M.Inst.Mun.E., Huntingdon; F. Marston [*A*], Derby; R. P. Gray [*A*], London; V. Kostka, Dipl.Ing., London and Czechoslovakia; B. E. Waren, P.A.S.I., Surrey; H. Dessau [*A*], Nottingham; R. Dyet, P.A.S.I., Lancs; C. E. D. Gibson, A.A.Dip. [*A*], Gloucestershire; G. V. Rees, Glamorgan; G. P. Pitot, Dip. Ecole des Beaux Arts, Mauritius; J. D. Peake, P.A.S.I., Herts.

Notes from the Minutes of the Council

MEETING HELD 15 APRIL 1947

Appointments

The National Trust: R.I.B.A. Representative Mr. John L. Denman [*F*], in place of Mr. W. A. Forsyth [*F*]. The cordial thanks of the Council have been conveyed to Mr. Forsyth for his long and devoted service as the R.I.B.A. representative.

R.I.B.A. Bronze Medal: New South Wales Chapter of the Royal Australian Institute of Architects: R.I.B.A. Representative on Jury. Mr. P. J. Gordon [*F*], Past President of the N.S.W. Chapter, R.A.I.A.

Direct Election to the Fellowship: The Council elected Mr. Stephen Kelly, President of the Royal Institute of the Architects of Ireland, to the Fellowship, under the provisions of the Supplemental Charter, 1925, Section IV, Clause 4.

R.I.B.A. **Diploma in Town Planning:** The Council have awarded the R.I.B.A. Diploma in Town Planning to Mr. John E. Deleuse [*A*].

R.I.B.A. **Architecture Bronze Medal: The Indian Institute:** The Council have approved the recommendation of the Indian Institute that the R.I.B.A. Bronze Medal be awarded in each of the four Chapters—Bombay, Delhi, Calcutta and Madras—of the Indian Institute.

Grants: The Council approved the following list of grants for the year 1947:—
British School at Rome, £750;
Building Industries National Council, £360;
Architects' Benevolent Society, £150;
British School of Archæology at Athens, £50;
British Standards Institution, £26 5*s.*;
Parliamentary and Scientific Committee, £26 5*s.*;
Council for the Preservation of Rural England, £25;
Festival of St. Luke, £25;
British School at Rome (Faculty of Archæology), £3 3*s.*;
International Union of Architects, £25.

Headquarters of U.N.O.: Arising from correspondence with the Secretary-General of U.N.O., the following letter from Mr. Glenn E. Bennett, Executive Officer of U.N.O., was read and noted:—

United Nations:
Headquarters Planning Office,
1270 Avenue of the Americas,
New York 20, N.Y.

20 March 1947.

Dear Mr. Spragg,

I wish to acknowledge the receipt of your letter dated 10 February 1947 enclosing copies of correspondence between Mr. Noel Baker and the Royal Institute of British Architects.

I am to inform you that the idea of an international competition was given most careful consideration but it was felt that in view of all the prevailing circumstances, the best method was to appoint a responsible Director of Planning to create an internationally composed Board of Design Consultants to advise him.

It was hoped that these leading Architects and Engineers from ten countries, selected on the basis of the widest geographical distribution, would establish an atmosphere of co-operation rather than competition. A decisive factor in the adoption of the above-mentioned scheme was the particular consideration of time and urgency. The present arrangements for the Secretariat are far from satisfactory and it is of the utmost importance that a permanent headquarters is available as soon as possible.

The ten members of the Board of Design Consultants are: Messrs. G. A. Soilleux (Australia), Gaston Brunfault (Belgium), Oscar Niemeyer (Brazil), Ernest Cormier (Canada), Ssu-Ch'eng Liang (China), Charles Corbusier (France), Nikolai D. Bassov (U.S.S.R.), Howard Robertson (United Kingdom), Julio Vilamajo (Uruguay), Sven Markelius (Sweden).

Yours sincerely,

(signed) Glenn E. Bennett, Executive Officer.
Mr. C. D. Spragg, Secretary, Royal Institute of British Architects.

The Joint Contracts Tribunal: The Council considered a report from the Tribunal in which its activities and terms of reference were reviewed in the light of present circumstances.

The Council have approved the following terms of reference:—

(i) To examine in the light of experience the forms of contract committed to their charge by their principals with a view to the issue of such revised editions as may be required from time to time.

(ii) To consider and advise upon points of interpretation.

(iii) To consider and advise upon any other matters relating to questions of contracts with which the Tribunal may consider it desirable to deal.

The Council also approved a recommendation that the membership of the Tribunal be increased by the addition of representatives of the Royal Institution of Chartered Surveyors and that, consequently, arrangements be made with the R.I.C.S. for the appointment of two Quantity Surveyors to serve on the Tribunal.

R.I.B.A. Annual Dinner: The Council passed a vote of congratulation and thanks to the Secretary, and through him to the members of the staff, for their successful work in the organisation of the Annual Dinner.

Membership: The following members were elected: as Hon. Associates, 5; as Fellows, 7; as Associates, 15; as Licentiates, 16.

Election: 24 June 1947: Applications for election were approved as follows: as Fellows, 16; as Associates, 60; as Licentiates, 18.

Students: 29 Probationers were elected as Students.

Applications for Reinstatement: The following applications were approved: as Associates: Tom Rothwell, Bruce Taylor Whincap; as Licentiate: Donald Norman Roy.

Resignations: The following resignations were accepted with regret: Maurice Lyon [*F*], Noel Dennis Sheffield [*F*], Miss Katherine Pamela Slater [*A*], William M'Clelland [*L*].

Obituary: The Secretary reported with regret the death of the following members:—
Frederick Dudley Danvers [*F*].
Edward Hastie [*F*].
John Jerdan [*F*].
John Thomas Saunders [*F*].
Henry Phillip Burke Downing [*Retd. F*].
Harry Wharton Ford [*F*].
Thomas William Turnbull Richardson [*Retd. F*].
Moses Joseph Henry Somake [*Retd. F*].
Edwin James Hamilton [*Retd. M.S.A.*].
Arthur Ernest McKewan [*A*].
George Eric Mitchell [*A*].
Leslie Ainsworth Bowden [*L*].
John Maynard Froud [*L*].
William Ambrogio Pecorini [*L*].

MEETING HELD 6 MAY 1947

Appointments:

Honorary Auditors 1947–48*:* Mr. Cecil Burns [*F*] and Mr. John Summerson [*A*]. (The above nominations were confirmed at the Annual General Meeting held on 5 May 1947.)
Licentiateship Committee: Mr. L. Sylvester Sullivan [*F*] in place of the late Mr. J. T. Saunders [*F*].
Building Divisional Council: R.I.B.A. Representative: Mr. Guy Wood North [*F*] in place of Mr. A. H. Barnes [*F*].
Committee of Moderators (1947)*:* Mr. Cecil Kennard [*F*].

The Royal Academy: The Council offered their hearty congratulations to Mr. Brian O'Rorke [*F*] on his election as A.R.A.

Direct Election to the Fellowship: The Council elected Mr. Roy Sharrington Smith, Past President of the Royal Australian Institute of Architects, to the Fellowship under the terms of the Supplemental Charter of 1925, Section IV, Clause 4.

History of Russian Art: The President informed the Council of a generous gift to him in his capacity as President from the Union of Soviet Architects of a *History of Russian Art* in five volumes, illustrated. He had deposited these in the Library in order that they should be available to members generally. The Council expressed their appreciation of the gift from the Union of Soviet Architects.

Annual Conference 1948: The Council have accepted the invitation of the Liverpool Architectural Society to hold the Annual Conference in Liverpool in 1948.

Conference on School Design and Construction: The Council have approved in principle a proposal to hold a conference on School Design and Construction, and to invite the Allied Societies and Local Government Authorities to send representatives.

The School Design and Construction Committee have been requested to prepare further detailed plans and syllabus for the conference.

Ministry of National Insurance Standard Type of Buildings: Scale of Fees: The Council have agreed with the Ministry of Works a basis of remuneration for private architects nominated by the Ministry in connection with work on standard type buildings. Details of the scale will be published in the next JOURNAL.

Bankside Power Station: The Council approved the despatch to the Minister of Town and Country Planning of a letter expressing opposition to the proposed erection of a power station on the South Bank. The terms of a letter to THE TIMES were also approved. This letter is published elsewhere in the JOURNAL.

Membership: The following members were elected: As Fellows, 8; as Associates, 81; as Licentiates, 14.

Election: 8 July 1947: Applications for election were approved as follows: As Fellows, 7; as Associates, 13; as Licentiates, 22.

Students: 17 Probationers were elected as students.

Applications for Transfer to Retired Members' Class under Bye-law 15: The following applications were approved: *As Retired Fellows:* Edward Thomas Allcock, John Kirkland, Frederick William Hobill Lee, John Stuart, Arthur George Warnham Tickle. *As Retired Licentiate:* Thomas Herbert Waumsley.

Membership Lists

ELECTION: 15 APRIL 1947

The following candidates for membership were elected on 15 April 1947.

AS HONORARY ASSOCIATES (5)

Aberconway: The Lord, C.B.E.,Tal-y-cafn, Denbighshire.
Barlow: Sir Thomas Dalmahoy, G B.E.
Knox-Shaw: Thomas, M.C., M.A., Cambridge.
Macmillan: The Rt. Hon. Lord, G.C.V.O., LL.D.
Methuen: The Lord, Corsham Court, Wilts.

AS FELLOWS (7)

Bloomer: Harry Clifford [*A* 1932], Birmingham.
Burridge: Patrick Francis [*A* 1935], Stockton-on-Tees.
Lewis: Hilary (Mrs.), B.Arch.(L'pool)[*A*1932].
Orman: Frederick Thomas [*A* 1936].
Parelkar: Shankerrao Harischandra [*A* 1933], Bombay.
Spence: Basil [*A* 1933], Edinburgh.
Swayne-Thomas: Geoffrey, M.A. (Cantab.) (Lieut.-Col. R.E.) [*A* 1934], Calcutta.

AS ASSOCIATES (15)

Barne: Ivo Miles.
Binney: Sylvia Muriel (Miss), Ilkley.
Burman: Arthur Bernhardt Lewis, Johannesburg.
Chapple: William Norman, Dip. Arch. (Cardiff)
Corker: Eric John.
Gerrand: David, B.Arch.(Rand), Aliwal North, South Africa.
Gore: Waman Sadashiv, Poona.
Heyman: Ernest Keith (Capt.), Leeds.
Korner: Ernest, Cremorne, N.S.W.
Loader: Dionyse Creswell (Miss).
Mutton: Leslie, Sydney.
Ryan: Thomas John, Dublin.
Singer: Kurt Hermann, Vaucluse, N.S.W.
West: Alan Ernest Stephen, Melbourne.
White: Lynton Stuart, M.B.E., M.A.

AS LICENTIATES (16)

Crowther: John Richard, Stockport.
Eugene: Frederick James.
Fish: Herbert, Glasgow.
Kingsnorth: Stanley Leslie.
Lee: Robert Cresswell Austin, Wrexham.
Mason: Andrew, Kilmarnock.
Massey: Cyril Claude, Sandbach.
Newman: Henry Cecil.
Price: Philip Roger, Preston.
Seagrim: Francis Stanley, Paignton.
Slaney: Oliver Edward Frank.
Smith: Clement James.
Smith: John Batson.
Stevenson: David Allan, Glasgow.
Stevenson: Stanley Benjamin, Manchester.
Wood: Frank, Dip. Arch. (Edin.), Edinburgh.

ELECTION: 24 JUNE 1947

An election of candidates for membership will take place on 24 June 1947. The names and addresses of the candidates, with the names of their proposers, found by the Council to be eligible and qualified in accordance with the Charter and Bye-laws, are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, R.I.B.A., not later than Saturday, 14 June 1947.

The names following the applicant's address are those of his proposers.

AS FELLOWS (11)

Bomer: Edward Dixon Neville [*A* 1931], 12 Nottingham Place, W.1; 'Pennlands Kiln, Farnham Common, Bucks. Frederick MacManus, Ian Forbes and Samuel Beverley.

Burrough: Thomas Hedley Bruce [*A* 1935], 25 Orchard Street, Bristol; Frenchay, near Bristol. G. D. G. Hake, E. H. Button and Sir George Oatley.

Fitton: Roderick Arthur [*A* 1927], 30 Molyneux Park Road, Tunbridge Wells, Kent; 7 Chapel Walks, Manchester 2. Applying for nomination by the Council under Bye-law 3 (d).

Poppleton: William Claude [*A* 1933], Smithy Brook, Middlestown, Wakefield. Norman Culley, H. W. Barker and F. L. Lumb.

Reed: William James [*A* 1920], Co-operative Wholesale Society, 99 Leman Street, E.1; 'Dunkeld' Honister Heights, Purley, Surrey. L. D. Tomlinson, Sir Banister Fletcher and applying for nomination by the Council under Bye-law 3 (d).

And the following Licentiates who have passed the qualifying Examination:

Davidson: Charles Stewart Milne, The Church House, The Close, Exeter; Heath Barton, Whitestone, nr. Exeter, Devon. H. M. R. Drury, J. Challice and F. MacManus.

Kirkham: Albert Victor Joseph, Messrs. Elliott, Cox and Partners, Coastal Chambers, 172 Buckingham Palace Road, S.W.1; Sloane House, Old Church Street, Chelsea, S.W.3. Sir Percy Thomas, E. A. Hunt and Frank Cox.

Marshall: Donald Plaskett, 59 Gordon Square, W.C.1; 31 St. John's Road, Seven Kings, Essex. R. H. J. Mayhew, Lt.-Col. W. J. Gregory and E. W. Palmer.

Roberts, Ivan Frederick, Friary Brewery, Guildford, Surrey; Folly Hill, BirtleyGreen, Bramley, Surrey. J. K. Hicks, A. F. Hooper and C. H. Murray.

Wilcox: John Wallace, 9 Stone Buildings, Lincolns Inn, W.C.2; 63 Beaufort Park, N.W.11 W. E. Watson, A. R. F. Anderson and E. Forster.

Wright: Frederick Rossiter, 123 Victoria Street, S.W.1; 18 Mapperley Close, New Wanstead, E.11. Prof. Basil Ward, H. A. Porter and C. W. Box.

AS ASSOCIATES (60)

Allan: James Shanks Alexander (Final), 11 Arklay Terrace, Dundee. C. G. Soutar, Wm. Salmond and J. D. Mills.

Appleton: Harold (Special Final) Flat 6, Chalcott House, Ditton Hill, Long Ditton, Surrey. J. G. Bennett, L. S. Stanley and A. D. Sayers.

Armstrong: Thomas (Special Final), 17 Ellersly Road, Murrayfield, Edinburgh. T. C. Marwick, A. A. Foote and J. R. McKay.

Baff: Lionel Charles McKew (Final) Ty Gwyn, Southend Road, Billericay, Essex. L. R. Gower, G. H. Griffiths and applying for nomination by the Council under Bye-law 3 (*d*).

Bantin: Charles Edward [Final], c/o T. G. Crump, Esq. [*F*], 43 George Street, Croydon. T. G. Crump, C. Blythin, and J. K. Hicks.

Beloff: Joseph Raymond (Arch.Assoc. (London) Sch. of Arch.), 1 Holford Road, Hampstead, N.W.3. M. H. Thomas, S. R. Pierce and R. E. Enthoven

Bloxham: John (Arch. Assoc. (London) Sch. of Arch.), 168 Tulse Hill, S.W.2. C. L. Gill, R. E. Enthoven and George Fairweather.

Boning: Ray William [Special Final], 'Windlehurst,' Tinshill Lane, Cookridge, Horsforth, nr. Leeds. Evan Morgan and applying for nomination by the Council under Bye-law 3 (*d*).

Buchanan: Colin Douglas (Lt.-Col.), B.Sc., A.M.T.P.I. [Final], The Cottage, Oakhill Grove, Surbiton, Surrey. Gordon Stephenson, S. L. G. Beaufoy and W. H. Godfrey.

Callard: Henry William [Special Final], 'Kilburn', 27 Heol Nest, Whitchurch, Glam, L. R. Gower, G. H. Griffiths and A. G. Lynham.

Castle: Gordon Reuben [Final], 97 Hall Road, Hull, East Yorks. E. W. Burnett, G. A. Humphreys and P. M. Padmore.

Caunt: Joseph John Arthur, B.A. (Arch.) (Bartlett Sch. of Arch., Univ. of London). 'Rydal Bank', Sandy Lodge Road, Moor Park, Rickmansworth, Herts. Prof. H. O. Corfiato, L. S. Stanley, S. Hyde.

Chappelle: Reginald Thomas, [Special Final], 68 Baswich Lane, Stafford. C. M. Coombs, E. B. Norris and G. C. Gadd.

Christensen: Angela (Miss) (Bartlett Sch. of Arch. Univ. of London), 38 Edgwarebury Lane, Edgware, Middx. Prof. A. E. Richardson, L. S. Stanley and Prof. H. O. Corfiato.

Collier: Harold James [Final], 20 Lime Avenue, High Wycombe, Bucks. C. W. Box, A. J. Seal and R. A. Phillips.

Creak: Harold [Special Final], 2 Lime Tree Avenue, Boston Spa, Yorkshire. C. Medley, G. H. Foggit and W. H. King.

Dahl: John Blom Seaton [Final], 91 Guilford Street, W.C.1. Prof. A. E. Richardson, H. I. Ashworth and J. L. S. Dahl.

Day: Geoffrey Edgar Paterson [Arch. Assoc. (London) Sch. of Arch.), Santa Barbara, Chiltern Hills Road, Beaconsfield, Bucks. S. Hamp, R. E. Enthoven and A. F. B. Anderson.

Deakin: Frank [Final], 210 Yardley Wood Road, Moseley, Birmingham, 13. H. M. Robinson, C. E. M. Fillmore and G. N. Hill.

Dean: Robert Stanley [Special Final], 1 Ladbroke Road, Epsom. J. H. Walters, L. S. Stanley and applying for nomination by the Council under Bye-law 3 (*d*).

Deane: Phillip Allen, M.A. (Cantab.), (Arch. Assoc. (London), Sch. of Arch.), Flat 7, 23 Queen's Gardens, W.2. D. Stokes, R. A. Cooksey and R. E. Enthoven.

Devaney: Patrick Alphonsus (Univ. Coll., Dublin, Ireland: Sch. of Arch.), 22 Eaton Square, Terenure, Dublin. J. V. Downes, Vincent Kelly and P. J. F. Munden.

Dunn: Ian Gilman (Arch. Assoc. (London) Sch. of Arch.), 83 Dartmouth Park Hill, N.W.5. Prof. Basil Ward, K. D. P. Murray and L. H. Bucknell.

Fletcher: Harvey Victor [Special Final], 68 Willow Road, Darlington, Co. Durham. F. Willey, H. E. Jarvis and G. R. Clayton.

Foreman: Robert Walter [Final], 50 Springfield Road, Exeter. H. V. de C. Hague, S. E. Urwin and A. G. Jury.

Gill: Oswald, B.A. (King's Coll. (Univ. of Durham), Newcastle-upon-Tyne, Sch. of Arch.) 48 Salters Road, Gosforth, Newcastle-on-Tyne 3. W. B. Edwards, A. K. Tasker and R. N. MacKellar.

Goodridge: Peter [Special Final], 1 Clarendon Flats, Balderton Street, W.1. E. C. Scherrer, J. K. Hicks and E. D. Mills.

Harries: Margaret Wendy (Miss) [Final], 26 Queen's Road, Sketty, Swansea. W. Wells Coates, Sir Percy Thomas and O. S. Portsmouth.

Hart: Kenneth [Final], 35, Clumber Road, West Bridgford, Notts. Applying for nomination by the Council under Bye-law 3 (*d*).

Hemingway: Richard [Special Final], 3 Castlewood Road, Sheffield 10. J. C. P. Toothill, J. M. Jenkinson and N. E. G. Weston.

Howlett: Leslie Robert [Special Final], 11 Crescent Road, Rowley Park, Stafford. A. C. H. Stillman, J. N. Meredith and L. S. Stanley.

Humphreys: Henry Robert [Final], 4 Lawn Avenue, West Drayton, Middx. L. S. Stanley, H. I. Ashworth and Guy North.

Husband: Raymond Joseph [Final], 40 Queens Road, Hoylake, Wirral, Cheshire. W. H. Gunton, E. N. Clifton and H. Gilford.

Ingham: Arthur Samuel [Special Final], 91 Green Lane, Vicars Cross, Chester. W. C. Young, G. N. Hill and Thomas Duffy.

Lane: Alexander John [Special Final], Flat No. 1, 91 St. John Street, Clerkenwell, E.C.1. D. L. Dick, A. H. Gale and B. W. Stuttle.

Launder: Victor Charles [Special Final], 'High Beeches', Castle Hill, Carisbrooke, Isle of Wight. A. C. Townsend, V. G. Cogswell and E. J. Thomas.

Marrable: Beryl Margaret Sarah (Miss) (Bartlett Sch. of Arch., Univ. of London), 3 Bressey Grove, South Woodford, E. 18. Prof. A. E. Richardson, Prof. H. O. Corfiato and L. S. Stanley.

Maw: Philip Guymer [Final], 25 Syringa Street, Marsh, Huddersfield. Norman Culley, C. Sunderland and N. R. Paxton.

Nibbs: Margaret (Miss) [Final], 26 Scarborough Road, Leytonstone, E.11. L. J. Bathurst, J. M. Easton and Miss Ruth Ellis.

Nowell: Olive Irene (Miss) (Arch. Assoc. (London) Sch. of Arch.), 18 Harrington Gardens, Kensington, S.W.7. Frederick Gibberd, George Fairweather and E. D. Mills.

Osman: Percival Frederick Robert [Special Final], 23 Bixley Road, Ipswich. Ernest Bird, E. J. Symcox and applying for nomination by the Council under Bye-law 3 (*d*).

Phillips: William Francis, B.Arch. (Univ. Coll., Dublin, Ireland: Sch. of Arch.), 'Harbour View', Doneraile, Tramore, Co. Waterford, Eire. Prof. J. V. Downes, P. J. F. Munden and Vincent Kelly.

Pryde: Donald Ian [Special Final], 'Lavenham' Marsh Lane, Mill Hill, N.W.7. H. D. Sugden, E. C. Scherrer and Jonn Dovaston.

Raeburn: Robert [Special Final], Flat 4, 27 Chartfield Avenue, Putney, S.W.15. A. D. Haxton, R. J. Harrison and C. W. Box.

Robertshaw: George Vincent (Leeds Sch. of Arch.), 8 The Poplars, Bramhope, nr. Leeds. Applying for nomination by the Council under Bye-law 3 (*d*).

Royle: Eric Vernon [Special Final], 351 Woodborough Road, Nottingham. F. A. Broadhead, C. F. W. Haseldine and T. N. Cartwright.

Seow: Eu Jin (Passed a qualifying Exam. approved by the Royal Australian Inst. of Arch.), c/o The China Institute, 16 Gordon Square, W.C.1. Leighton Irwin, J. F. D. Scarborough and C. E. Serpell.

Slack: Joseph [Final], Linden Grove, Gedling, Notts. T. C. Howitt, H. H. Dawson and T. N. Cartwright.

Smith: Hugh Standing (King's Coll. (Univ. of Durham), Newcastle-upon-Tyne, Sch. of Arch.) 'White Corner', Rowlands Gill, Co. Durham. Prof. W. B. Edwards, T. J. Cahill and Mrs. M. P. Cahill.

Smith: John Charles (Dip. Arch. (Dist.) Dunelm, King's Coll. (Univ. of Durham), Newcastle-upon-Tyne, Sch. of Arch.) 48 Sunbury Avenue, Jesmond, Newcastle-upon-Tyne 2. Prof. W. B. Edwards, F. N. Weightman and R. N. MacKellar.

Steel: George [Special Final], 5 Waterloo Place, Esplanade, Weymouth. H. W. Crickmay, C. R. Crickmay and E. W. Lewis.

Stott: Philip Sidney [Final], Stanton Court (Glos.), nr. Broadway, Worcestershire. F. W. Halfhide, Julian Leathart, Cyril Farey.

Stroud: Hedley William [Final], 33 Northcote Avenue, Surbiton, Surrey. Niel Martin-Kaye, P. G. Hayward, P. R. Fincher.

Sykes: Fred Oliver [Final], 19 Chandos Avenue, Leeds 8. Applying for nomination by the Council under Bye-law 3 (*d*).

Turnbull: Robert George Haddon [Final], 4 Garden Street, Glasgow, C.4. L. H. Ross, W. J. Smith and T. J. Beveridge.

Wakefield: Victor Hugh, P.A.S.I., [Special Final], 'Nevern', Ashby Road, Bretby, Burton-on-Trent. E. L. Hoare, H. W. Hobbiss and Thomas Jenkins.

Wakefield: William [Special Final], Flat No. 4, Baylis House, Stoke Poges Lane, Slough, Bucks. C. W. Box, Sydney Tatchell and G. C. Wilson.

Ward: John Frank [Special Final], 19 Hayes Close, Chelmsford, Essex. Harold Conolly, Jno. Stuart and L. S. Stanley.

Ware: John Lancaster (Bartlett Sch. of Arch.: Univ. of London), 10 Gunter Grove, Chelsea, S.W.10. L. S. Stanley, Prof. H. O. Corfiato and H. I. Ashworth.

Woodford: Charles Albert [Final], 53 Leander Road, Brixton Hill, S.W.2. A. D. Sayers, C. D. Andrews and H. W. Burchett.

AS LICENTIATES (18)

Bell: Richard Gray, H.M. War Office, London; 44 Bond Street, Englefield Green, Surrey. Applying for nomination by the Council under Bye-law 3 (*d*).

Benerdello: Henry, Cunard White Star Ltd., Cunard Building, Water Street, Liverpool; 27 Moss Lane, Maghull, Lancashire. E. C. Leach, G. G. Wornum, and H. A. Dod.

Chalmers: Alan Cyril, 16 Old Buildings, Lincolns Inn, W.C.2; Cobblers, Shackleford, Surrey. I. B. M. Hamilton, H. Lidbetter, and W. J. Palmer-Jones.

Duncan: Charles Fell, Architect's Dept., L.C.C., County Hall, S.E.1. Kern Estate, 438 Westhorne Avenue, Eltham, S.E.9. R. Wilson, Edwin Williams, G. W. Home.

Fuller: Alan Richard, 19 High Street, Lewes; 'Newlyn', Southover, Lewes. K. E. Black and the President and Hon. Sec. of the S.E.S.A. under Bye-law 3 (*a*).

George: Leslie Thomas, Architectural Section, Borough Engineer and Surveyor's Dept., St. Pancras Town Hall, Euston Road, N.W.1.; 99 Talgarth Road, Baron's Court, W.14. G. H. Jenkins, H. D. Roberts and T. J. Rushton.

Gilford: George, c/o Messrs. F. W. Woolworth & Co. Ltd., Martins Bank Building, Water Street, Liverpool 2; 58 Dovecot Avenue, Liverpool 14. H. Winbourne, Lt.-Col. B. C. Page and T. C. Page.

Harwood: Basil Frederick, Architect's Dept., Bucks County Council, Aylesbury; 12 Limes Avenue, Aylesbury. F. A. C. Maunder, W. T. Higgins and H. W. Smith.

Houghton: John Sanderson, M.A. (Cantab.), Messrs. Mitchell & Houghton, 38 Churchgate Street, Bury St. Edmund's, Suffolk; 8 Stonebridge Avenue, Bury St. Edmund's. W. H. Mitchell, Basil Oliver and Harold Tomlinson.

Merry: John Lee, Architect's Dept., Housing Technical Branch, Ministry of Health, Whitehall, S.W.1; 34A Aylmer Parade, E. Finchley, N.2. Archibald Scott, S. P. Taylor, and H. Greenwood.

Mole: Walter, Architect's Dept., Messrs. Courage & Co. Ltd., Horselydown, S.E.1; 7 Havelock Road, Dartford, Kent. F. M. Kirby, Leonard Pickford and A. Burnett Brown.

Pembery: Gerald Griffin, Architect's Dept., Public Health Section, Middlesex County Council, 20 Vauxhall Bridge Road, S.W.1; 80 Tamworth Lane, Mitcham, Surrey. C. D. Andrews, C. G. Stillman, and W. T. Curtis.

Raeside: James Boyd, c/o Miner's Welfare Commission, 3, 5, 7 Old Queen Street, Westminster, S.W.1; 13 Richmond Gardens, W.12. C. G. Kemp, J. A. Dempster and J. H. Forshaw.

Thomson: Ambrose Martin, Burgh Surveyor's Office, Dumfries; Ellangowan Hotel, English Street, Dumfries. J. McL. Bowie and the President and Sec. of the Glasgow Inst. of Arch. under Bye-law 3 (*a*).

Tothill: Frederick Robert, Three Gables, Cathedral Yard, Exeter, Devon; 75 Old Tiverton Road, Exeter. John Bennett, J. Challice and F. W. Beech.

Turner: Albert, c/o Francis L. Lumb [*F*], 19 Clifton Street, Blackpool; 'West View', 9 High Cross Road, Poulton-le-Fylde. F. L. Lumb, Halstead Best and C. H. MacKeith.

Wormell: Robert Thomas, Borough Engineers Dept., Corporation of Preston, Municipal Buildings, Preston; 3 Greystock Place, Fulwood, Preston, Lancs. C. C. Ogden, A. F. Bryan and F. H. Jones.

Wright: William Thyrd, Chief Architect, Burgh Engineer's Office, Town Hall Buildings, Rutherglen; 8 Barfillan Drive, Glasgow, S.W.2. John Watson and the President and Sec. of the Glasgow Inst. of Arch. under Bye-law 3 (*a*).

Members' Column

This column is reserved for notices of changes of address, partnership and partnerships vacant or wanted, practices for sale or wanted, office accommodation, and personal notices other than for posts wanted as salaried assistants for which the Institute's Employment Register is maintained.

APPOINTMENTS

Mr. W. Clifford Brown [*A*], Regional Architect to the Ministry of Health and formerly with the City Architect's Department, Leeds, has been appointed Deputy City Architect, Bradford.

Mr. Albert H. Clarke [*A*] has been appointed Chief Assistant Architect to the City Architect of Bristol. He will be pleased to receive trade catalogues, etc., c/o City Architect, Eagle House, Bristol 1.

Mr. Frederick F. Curtis [*A*] has been appointed Architect to the Great Western Railway. His address is Architect's Department, Great Western Railway, 121 Westbourne Terrace, Paddington, London, W 2.

Mr. D. W. Dickenson [*A*] has been appointed Principal Assistant Architect to the Kent County Council, Springfield, Maidstone. From 1 June 1947 his address will be 44 Oakdene Road, Sevenoaks, Kent.

Mr. Leslie R. Penman [*A*] has been appointed Deputy City Architect for Edinburgh. His new address for trade catalogues, etc., is City Architect's Office, City Chambers, Edinburgh.

Mr. Ronald J. Turner [*A*] has been appointed Senior Lecturer in the Department of Architecture, Municipal College, Southend-on-Sea.

PRACTICES AND PARTNERSHIPS

Mr. Francis J. D. Daly [*A*], practising at 44 Blackfriars Road, London, S.E.1 (Waterloo 5550), would be pleased to receive trade catalogues, information sheets, etc.

Mr. J. Stuart Dilks [*A*] has, since his release from the R.A.F., dissolved partnership with Mr. C. G. Butler [*F*] and is now practising at Orchard Cottage, Exton, near Exeter, and at 58 High Street, Honiton. He will be pleased to receive trade catalogues, etc., at his Exton address.

Mr. C. G. Dixon [*A*], until recently in the employ of the Ministry of Health as a London Regional architect, has recommenced private practice at 'Burbank', Barnet Lane, Elstree, Herts (Elstree 1534), and will be pleased to receive trade catalogues, etc., at that address.

Mr. R. H. Gallannaugh [*L*], **Mr. R. G. Nicholls** [*A*] and **Mr. H. F. Walls** [*A*], who practise under the style of Gallannaugh, Nicholls and Walls at Olivers Chambers, Frankfort Street, Plymouth, will be pleased to receive trade catalogues, information sheets, and other data.

Mr. John L. Gauldie [*A*], having resigned his appointment as architect on the staff of the Department of Health for Scotland, has commenced practice at 21 Castle Street, Edinburgh 2 (Edinburgh 21726).

Mr. William T. Harrison [*A*], who commenced private practice in June 1946 at Knowsley Buildings, No. 2, 15 Tithebarn Street, Liverpool 2 (Central 9150), will be pleased to receive trade catalogues, information sheets, and technical data.

Mr. B. A. Hatcher [*A*] has recently commenced practice at Cornhill Chambers, The Thoro'fare, Ipswich, and will be pleased to receive trade catalogues, etc. Mr. Hatcher has also been appointed Diocesan Surveyor to the Diocese of St. Edmundsbury and Ipswich.

By mutual agreement of the partners, the firm of **James & Bywaters and Rowland Pierce** of 5, Bloomsbury Street, W.C.1, was dissolved on 31 March 1947. Mr. C. H. James, R.A. [*F*] and Mr. S. F. Bywaters will continue to practise from 5, Bloomsbury Street, W.C.1, under the title James & Bywaters (Tel.: Museum 9952/9953). Mr. S. Rowland Pierce [*F*] will practise in his own name from 14, Chepstow Place, W.2 (Bayswater 3733), as a temporary address, to which communications should be addressed until further notice. Mr. W. W. Atkinson, O.B.E. [*A*] will practise in his own name from an address to be announced; his private address is 72, Addison Way, Hampstead, N.W.11 (Speedwell 0612), to which communications should be addressed until further notice.

Mr. Mordecai Pearlman [*A*], formerly of Sir John Brown, A. E. Henson and Partners, is now in practice on his own account, his temporary address being 205 Pavilion Road, Sloane Street, London, S.W.1 (Sloane 9477).

Mr. Frank Risdon [*A*], whose release from the Forces was notified in the November 1946 JOURNAL, states that trade catalogues have been incorrectly addressed to him at Woodfield Road, Beckenham. His correct address is 122 Barnfield Wood Road, Beckenham, Kent.

Mr. N. James Rushton [*L*], a partner in the firm of Rushton, Howard and Partners, has resumed practice at 17 Fleet Street, London, E.C.4 (Central 2669 and 2660), and will be pleased to receive trade catalogues, etc., at that address.

The association of Mr. F. Halliburton Smith [*F*] and Mr. P. Russell Walker [*A*], which was formed in 1943 under the name of Adams, Smith, Son and Walker, and later joined by Mr. Lionel Bailey, has been discontinued. Mr. Russell Walker and Mr. Bailey have now entered into partnership, under the style of **Bailey and Walker.** Their address will continue temporarily at 35 New Broad Street, London, E.C.2, until they move to larger offices. Mr. Halliburton Smith's practice (Adams, Smith and Son) remains unchanged.

Mr. William E. Mayer [*A*] has taken over the practice of Mr. Q. Mangnall Bluhm, D.S.O. [*F*], at 22 High Street, Chorley, Lancs.

Mr. Philip Skelcher [*L*] has taken into partnership Mr. Bryan E. Hatton [*A*] (late Lieutenant Commander, R.N.V.R.). The practice (previously known as Skelcher, Machin and Watson) will continue under the title of Philip Skelcher and Partners, at Lloyds Bank Chambers, Poplar Road, Solihull, Birmingham. (Solihull 2568.)

Mr. Charles M. Swannell [*F*] has taken into partnership Mr. K. F. Templeman [*A*]. They will practise under the style of Chas. F. Swannell and K. F. Templeman at 6 Raymond Buildings, Gray's Inn, W.C.1. (Holborn 1503.)

CHANGES OF ADDRESS

Mr. Frederic S. Alexander [*A*] has removed from 168 Station Road, Hendon, to 161 Station Road, Hendon, London, N.W.4.

Mr. Kenneth Arundel [*A*] has removed to 92 Howard Road, Leicester.

Mr. Leonard Crowfoot [*L*] has moved his offices from Wellington Street, Newmarket, to 'The Studio', Rutland Chambers, Newmarket, and will be pleased to receive trade catalogues, etc.

Mr. W. H. Gill [*A*] has removed to 16 Pulteney Street, Bath.

Mr. S. Penn Smith [*L*] has removed from 27 Friar Lane, Leicester, to Waterloo House, 2 Hastings Street, New Walk, Leicester. (Leicester 22184.)

PRACTICES AND PARTNERSHIPS WANTED AND AVAILABLE

Associate with valuable connection for future work, now maintained by a retaining fee, wishes to join West End firm of architects as architectural assistant with view to partnership arrangement when contracts materialize. Reply Box 47, C/o Secretary, R.I.B.A.

Fellow with Bedfordshire and district practice would be pleased to receive applications from qualified men for a junior partnership in an exceptionally busy office. Reply Box 42, C/o Secretary, R.I.B.A.

For sale, owing to ill-health of principal, old-established practice in West Midland county town. Reply Box 45, C/o Secretary, R.I.B.A.

Old-established practice for sale in important South Midlands town, owing to retirement of principal. For particulars, reply Box 43, C/o Secretary, R.I.B.A.

Partnership in old-established West London practice for sale to qualified architect with varied experience. Reply Box 46, C/o Secretary, R.I.B.A.

Partnership, or position leading to early partnership, required by keen young member, with sound practical experience, specializing in domestic, industrial and war damage reinstatement work. Capital available, if necessary, together with prospective work and good connections. London and Southern Counties preferred. Reply Box 40, C/o Secretary, R.I.B.A.

Partner required by member with old-established practice in Warwickshire, busy with housing, brewery and other varied work. Reply Box 39, C/o Secretary, R.I.B.A.

Partner required in old-established firm of architects, surveyors and valuers in North West town; alternatively assistant with view to early partnership. Reply Box 41, C/o Secretary, R.I.B.A.

WANTED AND FOR SALE

Help for a Blind Architect: The Secretary of the Architects' Benevolent Society wishes to thank all members who so generously offered to read the JOURNAL to the blind member at Balham and to state that this service has now been arranged.

Wanted by member. Office equipment, including filing cabinets, drawing tables or benches; also a theodolite and precision level. Reply Box 35, C/o Secretary, R.I.B.A.

Wanted. D.E. drawing-board and T-square, also plan chest (d.e.). Reply Box 36, C/o Secretary, R.I.B.A.

Wanted. Plan chest, d.e. size approximately 3 ft. 8 ins. by 2 ft. 7 ins. by 3 ft. high, preferably 6 drawers and in 2 sections. Light oak, metal or suitable for painting preferred. Must be in good condition. Details, price and address for inspection to Box 37, C/o Secretary, R.I.B.A.

Wanted. Wood plan chest, d.e. size either two unit (8 drawers) or three unit (12 drawers). Reply Box 48, C/o Secretary, R.I.B.A.

ACCOMMODATION

Two young ex-Service members require urgently by Summer office accommodation in the City or West End. Mutual assistance would be given if required. Reply, with details, to Box 44, C/o Secretary, R.I.B.A.

Provincial firm requires small office of two or three rooms in Holborn or Strand areas. Reply Box 34, C/o Secretary, R.I.B.A.

MEMBERS RELEASED FROM THE SERVICES, ETC.

The following members have notified the R.I.B.A. that they have been released from the Services and are resuming practice and would be pleased to receive trade catalogues, etc. :—

Mr. Reginald Eyre [*A*] (late Major, R.E.) on release from the Services has resumed practice with Messrs. Palmer and Turner (A/F) at French Bank Building, D'Almeida Street, Singapore.

Mr. A. Hershman [*A*], 28 New Hall Road, Salford 7, Lancashire.

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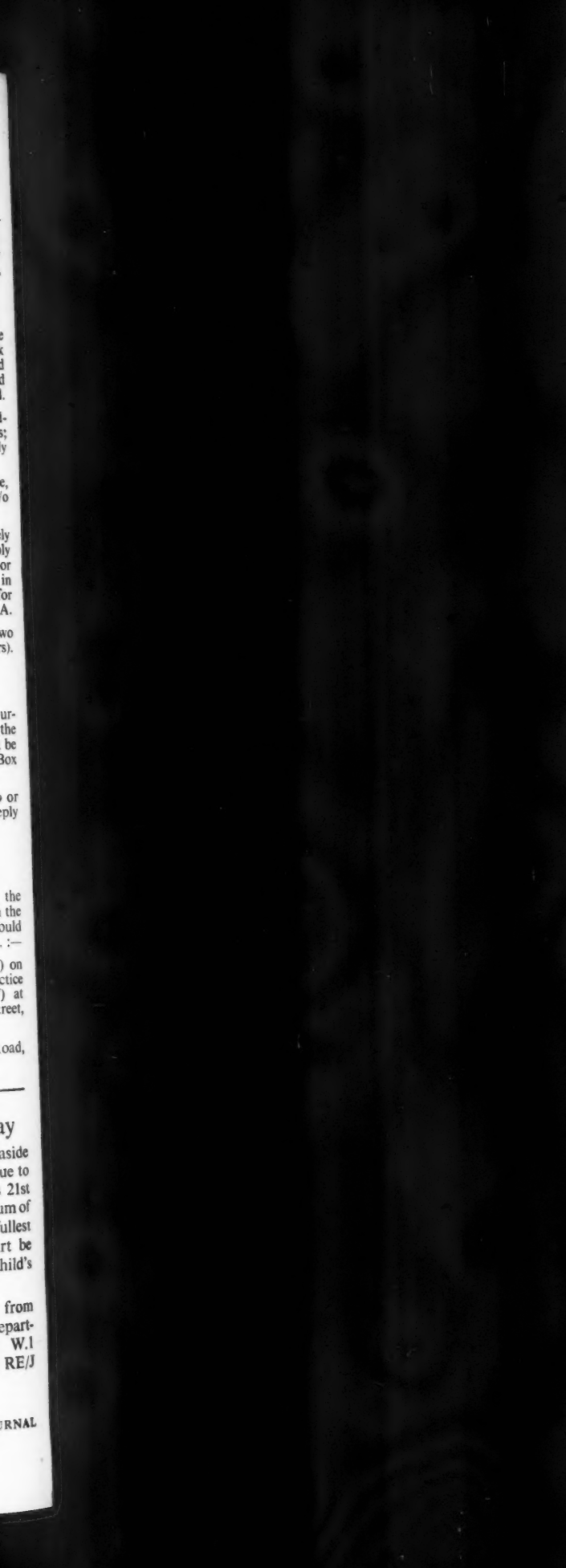
Please write for full particulars from the Secretary, A. B. S. Insurance Department, 66 Portland Place, London, W.1 (Telephone: WELbeck 5721). Quote: RE/J when replying.